IAN MICHAEL SOLLEY

Simply Understanding Toxicity

I.B.S.
Not All In The Mind

Eliminate the Toxins that Cause I.B.S., Food Allergies & Fatigue
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INTRODUCTION

I have very personal reasons for writing this ebook. I had spent over 15 years searching for a cure for my Post Viral Fatigue Syndrome, which began in 1989 during my final year of University. The subsequent realisation that going to my doctor and getting well again as a result was not going to happen, along with another doctor’s change of diagnosis and the belief that my problems might lie in my mind and not in my physical body, created a great deal of unnecessary anxiety. This, in turn, led to my having panic attacks during 1990. After forsaking the NHS (National Health Service), I explored alternative medicine and started consulting private doctors.

If you are reading this, it means that you too are experiencing health problems that your own General Practitioner (GP) or Doctor has been unable to address. Unfortunately, doctors and consultants within the NHS seem to be at a loss as to how to identify or treat cases where the symptoms are as diverse as the ones described on my website.

Only recently have some doctors begun to recognise that the root cause of a vast range of health problems from Allergies to Alzheimer’s can be attributed to the build-up of biotoxins in the body and neurotoxins in the brain. Biotoxins such as chemicals (including pesticides and herbicides), pathogens as bacteria, viruses, fungi and parasites, along with heavy metals, such as mercury and lead, can cause havoc on the body’s nervous system, immune system, hormonal system and digestion.

I had a series of blood tests at a laboratory in 1990 and 1991, and I was first introduced to the idea of a potential candida problem. But, at that time, there were no reliable tests for candida. Heavy metals were discovered, though these results only found a ‘safe’ level of mercury in my blood; thus, no action was taken. In 1998, a Harley Street doctor again also noted heavy metals – through the use of hair tests and a Vega Test Machine – though this time with excessive levels of lead being present. (The effectiveness of tests is covered in SECTION 3.)

Fortunately, after years of going round in circles doing parasite cleanses and trying to detox heavy metals, I came across what has turned out to be the most comprehensive method for detoxing all neuro and biotoxins, a programme that has cleared up what, for many, are very debilitating and frustrating symptoms.

Firstly though, before we take a detailed look at some of the illnesses related to a high toxic burden, it’s worth looking at just how prevalent and common many of these toxins now are.
SECTION 1: BODY OVERLOAD

Environmental Soup
The food and drinks we consume and the air we breathe are now more contaminated with environmental toxins than at any other time in our history, and, depressingly, there seems to be little or no reduction in this environmental burden.

According to Steven R. Schechter, author of *Fighting Radiation and Chemical Pollutants With Foods, Herbs and Vitamins*, there are literally tens of thousands of chemicals in commercial production in the United States, 90% of which are potentially if not definitely hazardous. See [http://www.chemicalbodyburden.org/whatisbb.htm](http://www.chemicalbodyburden.org/whatisbb.htm)

Three thousand chemicals have been identified as intentionally being added to food supplies and over 700 to drinking water. During food processing and storage, more than 10,000 other compounds can become an integral part of many commonly-used foods. According to research from Liverpool University in the UK, there are 70,000 chemicals in use, with 1,000 new chemicals being added every year.

The proof that our environment is poisoning us can be seen from increases in autism, allergies and cancers; and the effects of this toxic soup upon health are directly reflected in the statistics for major diseases. Western countries are currently experiencing increases in many serious degenerative diseases: heart disease (survival rates are improving due to advancements in treatment not changes in lifestyle); certain types of cancers – including prostate, breast and colon; osteoporosis, Alzheimer’s, and also diabetes and obesity. At the time of writing (2004), a study has just reported on a link between the increase in oesophageal cancer in developed countries and the high consumption of carbonated drinks. Developing nations don’t show a similar increase.

Last year, The World Cancer Report, released by the International Agency for Research on Cancer (the IARC is part of the World Health Organisation), stated that the number of new cancer cases worldwide is expected to increase by 50% to 15 million by the year 2020.

According to Paul Kleihues MD, director of the IARC, “Cancer has emerged as a major public health problem in developing countries for the first time, matching its effect in industrialised countries.” Remarkable, when you consider that cancer was once considered to be a Western disease. Researchers say cancer rates have traditionally been higher in developed countries due to greater exposure to tobacco, occupational carcinogens and an unhealthy Western diet and lifestyle.

As less-developed countries become industrialised and more prosperous, they tend to adopt the high-fat diet and low physical activity levels typically seen in the West, which are factors in increased cancer rates.

We already know the proportion of hereditary cancers that are passed on between generations is actually relatively low when compared to the incidence of non-communicable cancers. This tells us that we need to pay attention to the factors that affect the individual directly.

This point is illustrated perfectly by looking at Japan. Forty to 50 years ago, a country such as Japan had low levels of cancer in comparison to those of Europe and America. Over the last 50 years, rates of colon cancer have increased nearly four times. Prostate and breast cancers have doubled. As the Japanese have adopted Western diets and
undergone an economic transformation, with its inherent effects upon the environment, they’re now experiencing more and more cancers, albeit at a lower rate than in Europe and America.

If we just take a look at the UK, evidence is being produced almost weekly to support this global phenomenon.

Cancer is now one of the main causes of death among British men (testicular then bowel). The British Liver Trust reports on the rising trend in deaths from cirrhosis. The British Heart Foundation informs us that coronary heart disease (through smoking) is the most common cause of death in women. Where I live in the SE of England, circulatory disease and cancer are the main causes of mortality, accounting for 65.4% of deaths each year (2001). Incidentally, as far smoking goes, if you are serious about your health, then it’s worth considering the following.

After a 50-year study using a sample of 35,000 people in the medical profession – half of whom smoked – it was discovered that smokers have a 50:50 chance of premature death. A quarter will die in middle age. Only 134 smokers are left from a sample of 17,500 smokers.

According to Cancer Research UK, smoking causes cancer, heart disease and chronic lung disease. It kills 120,000 people in the UK every year and is the single most preventable cause of early death in the world.

Smoking is the biggest avoidable risk factor for cancer. It causes nine out of 10 cases of lung cancer, the most common cause of cancer death in the UK. Smoking is also a risk factor for cancer of the bladder, kidney, cervix, throat (pharynx and larynx), mouth, oesophagus (gullet), pancreas and stomach and for some types of leukaemia. Smoking causes a third of all cancer deaths, and lung cancer alone kills one person every 15 minutes in the UK. It does this because cigarette smoke is packed full of around 4,000 compounds, many of which are toxic and can cause damage to cells. Some are carcinogenic.

The three main ingredients of cigarette smoke are:

- Nicotine
- Carbon monoxide
- Tar

Nicotine is not carcinogenic, but it is a highly addictive and a very fast-acting drug, reaching the brain in fewer than 15 seconds.

Carbon monoxide is a tasteless, odourless poisonous gas. It is taken up by the bloodstream quickly and impairs breathing. This gas is also emitted by car exhausts, faulty boilers and fires and is very dangerous in badly ventilated spaces. Inhaling too much carbon monoxide causes coma and death by asphyxiation.

Tar is a substance made up of various chemicals, many of which are known to cause cancer. Around 70% of the tar in cigarettes is deposited in the smoker’s lungs.

Other harmful chemicals in cigarette smoke include (and this may surprise you):

- Acetone, more commonly used in nail polish remover
- Ammonia, used in the dry-cleaning industry
- Arsenic, a deadly poison used in pest control and insecticides
- Benzene, a cancer-causing agent used in the production of fuel and chemicals
- Cadmium, a very poisonous chemical that can cause liver, kidney and brain damage, used in batteries
- Formaldehyde, a known carcinogen used to preserve dead bodies
If this doesn’t inspire you to quit, then I suggest you read Alan Carr’s *The Easy Way to Quit Smoking*. Without this book, I’d still be on thirty a day!

Slowly, we are becoming aware that the common and familiar products we are consuming on a daily basis are having a significant bearing on our health and wellbeing. Unfortunately for more and more of us, unless we personally take steps to deal with this toxic build-up, more people will face additional health problems.

**Sources of Metals and Chemicals**
I want you to understand here how, without your even being aware of it, your body is constantly being exposed to a myriad of environmental toxins due to our modern lifestyle.

1. **Food and Drink**
When you think of the words food and drink, it’s fairly unlikely you’ll associate them with chemicals and metals. Right? Wrong! Read this and you’ll probably never think of food in the same way again – I hope.

Chemicals such as TBT, used in boat paint in the 1960’s and finally banned in 1980, were among the first to be recognised as endocrine disrupters. The endocrine system produces chemical hormones that control reproduction, growth and behaviour. This chemical caused irreversible damage to the reproductive organs of Dover sole, salmon, shrimps and oysters off the south coast of England. Concentrations of just five parts per trillion in the water had been enough to interfere with the endocrine (hormonal) system of these fish.

Synthetic chemicals can be used as food additives and fungicides and pesticides. Some, such as organochlorines, remain in the food chain. Others such as phthalates (endocrine disrupters used to soften plastics) are more transient. N.B. Clingfilm wrapped around high fat foods causes plasticisers to leech into the food. Also, it should not be used in contact with food that has been microwaved. More than 40 pesticides have also now been identified as possible endocrine disrupters. And where do we come into contact with these pesticides? Our food.

And the worst offenders for pesticide residues? According to UK Government data: lettuce, apples, celery, spinach, peaches, pears, grapes, nectarines, strawberries, fresh salmon and wholemeal flour. The UK Government’s pesticide committee found 75% of brown bread and 65% of white bread to be contaminated with a pesticide called chlorimequat. Brown bread also had traces of two other pesticides. Other pesticides have included prothiofos, which is banned in the UK; carbendazium, which is implicated in hormone disruption; and chlorpyrifos, an organophosphate restricted in the US. Pesticides feature largely in coffee production too.

Other foods that are regularly contaminated but pass the pesticide residue tests in Europe include bananas. In half the number of bananas tested were residues, one sixth of them containing multiple residues. In almost two thirds of grape samples were residues, a quarter with multiple residues. In the US, there is a further tenfold safety factor applied to protect the foetus and infants: this isn’t the case in Europe.

Pre-packaged salads and vegetables are usually washed in chlorinated water, so it’s best to wash them thoroughly (even if pre-washed). N.B. Nutrients such as vitamin C are lower than in raw salads and vegetables.

You may have been aware of controversy caused by research out of Indiana and Cornell University that appeared in *Science* magazine surrounding the level of toxins in farmed salmon. The recommendation is that you should eat this type of fish no more than two or three times a year. Farmed salmon have a higher fat content than wild salmon. *Oily*
Fish, good for you because of those oils, contain higher levels of environmental toxins than less fatty fish. Toxins that can be found in the fat cells of these fish include mercury, DDT, PCB’s (pesticides) and dioxins, sometimes in very high concentrations. Farmed fish are typically exposed to over twenty different types of chemicals including antibiotics, antimicrobials, disinfectants and dyes that make them pink. In 2002, the Veterinary Residues Committee found traces of an antiparasitic chemical in UK farmed trout and salmon.

But are chemical testing regulations and safety margins regulated and rigorous? No, safety factors are arbitrary. Tests rely on working out a dose that produces "no observed acute adverse effect” on rats or mice, and this is then divided by ten, as humans may react differently from rats, and redivided by ten again (i.e. times 100) to allow for variations between individuals. Doses are divided by ten again for chemicals that cause cancers or are neurotoxic. Regulators then set safe daily intakes. Anyone worried yet? See any flaws in this system? Well...

It takes no account of the timing of the exposure. There are periods in human development when individuals can be most at risk from exposure, such as in pregnancy, when the foetus has no blood brain barrier and an undeveloped immune system; during puberty, when hormonal changes measured in low parts per billion cause rapid cell division; and in old age, when the defence mechanism is at its weakest.

Incidentally and importantly, toxic exposure doesn’t just occur in people who’ve been exposed either occupationally or have had compromised immune status. Amanda Ursell, a respected British nutritionist, discovered that a group of healthy pregnant women, when tested for toxins in their breast milk, tested positively to traces of pesticides and even, in one case, chemicals used in flame retardants. Heavy metals can also be passed through breast milk. However, before considering being tested, studies still show the benefits of breast-feeding outweigh the disadvantages. Breast milk produces greater levels of immunity. To avoid passing on persistent bioaccumualtive chemicals to a baby requires forward planning. You are advised to eat food that doesn’t use chemicals in its preparation.

Regulators take no account of the ‘cocktail effect’ of the combination of chemicals. Research from Liverpool University’s Pathology Department on foetal toxicology has found that some pesticides are more toxic in combinations than on their own.

To test mixtures of the 1,000 most common chemicals in combinations of three would take 166 million different experiments. It is believed that the average person on the street now has hundreds of groups of completely novel compounds in their bodies that weren’t there 60 years ago. And this is known because the chemicals can be measured in adult and foetal tissue. Effectively, there is no way of knowing how these chemicals interact with each other.

It seems the best thing to do is limit exposure as much as possible, and this is the advice from The Ontario College of Family Physicians, who have made links between pesticides and cancer of the brain, kidney, pancreas and prostate, and leukaemia, and neurological diseases and reproductive problems.

Pesticides (and industrial pollutants) are not the only source of endocrine disrupters. Low fibre, high carbohydrate/sugar diets may also alter the level of oestrogens made available within the body just as with obesity, because body fat can convert other steroid hormones into oestrogens.

If you need a reason to start drinking filtered or bottled mineral water, consider the fact that women taking oral contraceptive pills excrete synthetic oestrogens, and these have been detected at low levels in drinking water. Also anabolic oestrogens (banned in
Europe in 1981) were given to farm livestock, and this practice still continues in the US. Intensive farming also results in cows being milked continuously, even while pregnant, which contributes to high levels of oestrogens. How much we absorb is open to question. For a comprehensive database on pesticides, go to: http://www.pesticideinfo.org/Index.html or Pesticides Action Network at: http://www.pan-uk.org/

This website includes a list of the P.A.N.’s ‘dirty dozen’ pesticides suspected of being carcinogenic or endocrine disrupters. Since this book was first written this subject has become widely publicised in the media.

The 540 food additives judged safe by regulatory bodies are another problem. ‘Tested’ in this country (UK) implies before data had to be made available to the public by non-independent consultants paid for by the food industry; we still have additives that some countries have banned. We have synthetic colourings, some of which have been found to induce tumours in laboratory animals.

The US Centre for Science in the Public Interest has raised doubts about not just these but also synthetic anti-oxidants and preservatives, artificial sweeteners and flavour enhancers.

Flavourings in the UK don’t have to be tested and are only controlled on a case by case basis. If you still really believe that all these additives are acceptable, because surely otherwise the Government wouldn’t allow them, you are failing to recognise the power and influence of some of the biggest and most popular food manufacturers and chemical companies, whose members sit on the boards of Government regulatory bodies governing food safety standards.

If you don’t believe that their economic influence allows paid ‘experts’ to understate the potential risks of food additives, read Martin J. Walker’s book Dirty Medicine. It has taken over two decades for these regulatory bodies even to accept the now common scientific knowledge that some additives cause hyperactivity, attention deficit disorder and migraine in children. Independent research and alternative medicine have been suppressed for the last century or more. Surely not all of these people can be quacks?

Let’s take a look at some of the worst offending additives:

- Acesuflame K, an artificial sweetener. Uses include fizzy drinks. Produced tumours in animal lab tests but still certified safe.
- Acrylamide, found in foods rich in starch cooked at high temperatures. A cancer-causing agent discovered by Swedish animal research. The UK Food Standards Agency is also in agreement, but you can still buy these products e.g. crisps.
- Ammonia Caramel E150c, colouring made from heating sugar with ammonia. Uses include beef stock cubes.
- Aspartame E951, artificial sweetener. Uses include fizzy drinks, chewing gum, yoghurts, medicine and multivitamins. Considered to be a neurotoxin and now the subject of class actions in the US.
- Caffeine, mild stimulant. Found in tea, coffee, and soft drinks. Can produce withdrawal symptoms, headaches and fatigue. Also found to increase the risk of miscarriage (and possibly birth defects) and inhibit foetal growth. No definitive evidence associating it with heart disease, high cholesterol, osteoporosis and hypertension.
- Disodium 5‘-ribonucleotide E635 flavour enhancer. Uses include beef stock cubes.
- Monosodium Glutamate (MSG) E621, a flavour enhancer. Found in soups, salad dressings and restaurant foods. Alleged links to nerve cell damage in the brain, asthma and neuroendocrine disorders. No compelling scientific evidence exists to support allegations.
• Phenylalanine, a component of aspartame. (N.B. EU law states that ingredients which fall under a certain percentage aren’t required to be listed separately, so you don’t know what’s in a product. You’ll see it as ‘flavourings’ on the package.) Due to phenylketonuria, a rare genetic disorder that occurs in one out of 15,000 births, products containing aspartame must carry a warning of its presence.
• Sodium Benzoate E211, a preservative. Uses include fizzy drinks. Produces allergic reactions in those prone to urticaria (nettle rash) or asthma sufferers. High doses of 50-500mg can decrease lung functioning and induce asthma.
• Sodium Nitrate E251, a preservative/colouring/flavouring. Found in bacon, ham, frankfurters, luncheon meats, smoked fish, corned beef. Studies link to cancer although unproven in humans. Pregnant women should avoid it.
• Sulphur Dioxide E220, a preservative/anti-oxidant. Uses include preservation of dry fruits. Can trigger asthma in sensitive individuals even in low doses.
• It has also been recommended that artificial colourings Blue 1, Blue 2, Green 3, Red 3 and Yellow 6 be avoided (for the US). For Europe, Quinoline Yellow E104, Brilliant Blue E133, Sunset Yellow E110, Carmosine E122, Ponceau 4R E124 and Indigo Carmine E132. Taking just Sunset Yellow, which has been banned in Norway, this colouring has been linked to nausea, abdominal cramps and hyperactivity and with increased incidence of tumours in animals.

For more comprehensive E number listings (due to lack of space within this eBook), please visit: http://www.additivesout.org.uk For allergy sufferers, this website has masses of E numbers related to asthma and other allergic symptoms. Also helpful is: http://www.cspinet.org/

Go to the ‘Food Safety’ link to see a detailed listing of additives and the research.

Owing to the sheer volume of E numbers and the risks of pesticides, it seems only sensible to buy as many organic home-produced foods as possible, home-produced because imported foods are subject to fumigation. Organic meat can be particularly expensive, so I recommend free range as the next best alternative. (SECTION 2 on Candida has more detail.)

Sources of metal that are finding their way into foodstuffs are a feature of some processed foods. (I’m referring to packaged food as well as food that undergoes a chemical alteration.)

Take, for example, vegetable oils. These have a limited use: you can’t spread them or bake with them, so in order to increase the oils’ viscosity, making them more solid, food manufacturers bubble hydrogen through the oil, using nickel-based catalysts. This not only prolongs the oils’ shelf life but also allows manufacturers to use the fat in cakes, biscuits and quiches. This fat is used for frying chips or fries. Unfortunately, minute traces of nickel from this process end up in the fat.

Apart from metal exposure, hydrogenation, as well as converting polyunsaturated oils into saturated fat, also produces synthetic trans-fatty acids.

Conveniently supermarket margarine with names that suggest they’re “really good for you” list these trans fats as a trace quantity in percentage terms (½% is typical). If the regular tub size is 500 grams and every fortnight you consume approximately 2.5 grams of trans fats, then over fifteen years (we were told butter is bad for you in the late 80s) you’ve eaten a whole kilogram (2.2lbs) of trans fats. And that ignores other sources. So what, I hear you say? Well, trans fats have a number of problems:
• The body can’t break them down, so it ends up storing this problem fat.
• They increase cholesterol levels in the blood, increasing the constriction of blood flow in the vessels, thereby increasing the risk of heart attack and stroke.
• They increase the levels of low-density lipoprotein cholesterol (LDL) (‘bad’ type) and decrease the level of high-density lipoprotein cholesterol (HDL) (good type). (Actually in fact there are no absolute good or bad lipoproteins; it’s the balance that’s important. LDLs transport essential fatty acids critical for cell growth – more on this later.)

Harvard research showed that replacing just 2% of a person’s energy intake of trans fats with unhydrogenated or unsaturated fats could reduce the risk of heart disease by a staggering 50%. The Food Standards Agency in the US suggests a tolerable upper intake level of trans fats of ZERO.

A word about butter: yes, even organic butter contains trans fats, as these are found in small quantities in the gut of cows and sheep but it’s the artificial trans fatty acids that are of concern over blood lipid levels (fat molecules in the blood).

Infant milk formulas have also been tested positive to aluminium and heavy metals, phthalates and bisphenol A.

And if you were thinking of enjoying a nice glass of wine with your fish, think again. A recent study found that 87% of normal and 61% of organic wines from southern Italy had over five different varieties of pesticide and fungicide residues. Studies also identified lead (from growing grapes in heavy industrialised regions), and the same applied to Bulgarian wines that were found to have over twice the permitted level of lead.

To reduce exposure here are some tips:
• Eat unprocessed fresh foods and a varied diet to avoid over exposure to certain chemicals that are in foods.
• In the absence of organic food, eat foods found to be lower in pesticides, such as aubergines, marrow, cabbages, leeks, frozen peas and garlic.
• Wash all fruit and vegetables, even if they are ready washed. Peel the outer layers of leafy vegetables, and trim fat from meat and skin from poultry.

Mercury toxicity from fillings is covered in SECTION 3.

A table of sources of metal toxins follows below.

2. Beauty Products
The chances are that there’s an array of chemical-based (as opposed to herbal-based) skin creams, shampoos, perfumes and other toiletries sitting in your bathroom cabinet which you are unlikely to even consider in your health problems – unless you suffer from chemical sensitivities. That’s hundreds of compounds you’re exposing yourself to daily. (I stopped using underarm deodorant sprays after I became ill because I couldn’t tolerate any chemical odours or perfumes and had to avoid them.)

The issue here for you is not trying to pinpoint one particular culprit – although spasmodic allergic symptoms such as streaming eyes and sneezing attacks will soon make you realise, for example, it’s the washing powder on your jumper that you’ve just put on causing these attacks – but appreciating the effect this combined toxic burden has upon your immune system. Chemicals bio-accumulate. That is, the body when simply unable to break them down or flush them out, retains them.

Here in the U.K., the European Commission takes on the task of identifying and banning individual culprits. Chemicals such as DEHP and DBP, known as phthalates used as solvents in cosmetics and otherwise found in plastic toys, vinyl floor tiles, glues and inks, have now been banned; others are being phased out. These chemicals have been identified as hormone disrupters and have been found in breast milk. High levels
in the blood have also caused premature breast development in Puerto Rican girls, and infants as young as three have shown signs of puberty. Phthalates are hard to identify and are listed only under the term ‘parfum’ (any artificial scent or perfume) on cosmetic bottles.

Let’s look at some common cosmetics and the ingredients we never think about:

- Anti-dandruff shampoo: chemicals such as zinc pyrithione cause few problems to the skin, but ingestion by laboratory rats over a 14-day period caused deformed spines and muscle wastage.
- Blusher: typically contains propylene glycol. May produce allergic reactions. This chemical is also found in anti-freeze.
- Eye shadow: small quantities of arsenic found in 49 samples tested in Finland. US evidence suggests chronic exposure to minute levels can cause hormone disruption.
- Hair dyes: arylamines in permanent hair dyes may possibly be responsible for a twofold greater risk of bladder cancer in women who use dye once a month. The University of California concluded that some people’s genes determine whether they are able to excrete the carcinogens from their system quickly enough. Semi-permanent and temporary dyes were not found to increase cancer rates.
- Lipgloss: contains parfum which contains hundreds of ingredients, 24 of which cause common allergic reactions.
- Lipstick: includes butylparaben, propylene glycol and lanolin. Over 45 years, a user is likely to swallow 2lbs of it.
- Mascara: This contains parabens. Research concludes parabens have oestrogen-mimicking effects. As yet, parabens have not been found to enter the bloodstream – according to the European Cosmetic Toiletry and Perfumery Association. N.B. The cosmetics industry is responsible for policing itself.
- Nail varnish: the Protection Agency’s Office of Pollution and Prevention in the US warns that breathing large quantities of the ingredient toluene can affect the kidneys, liver and heart. Formaldehyde has also been used in hardeners and is banned in Sweden and Japan. Nail varnish remover contains acetone, an irritant to nose, throat, lungs and eyes.
- Shampoo: sodium laureth sulfate. Safe in low doses, but can trigger eczema in higher doses over prolonged periods.
- Shaving cream: apart from having parabens and alcohols, this may also have a chemical known as DEHA. Ingestion by mice has caused cancerous tumours.
- Soap: the major component is propylene glycol. It is a mild irritant, easily absorbed by the skin. Large amounts, if continually applied to the skin or ingested, can depress the central nervous system (CNS).
- Toothpaste: fluoride is harmful in large doses particularly to babies and children. 2mg/day is typical, but studies show that 6mg/day can cause skeletal fluorosis (brittle bones).

N.B. Phthalates, parabens and sodium laureth sulfate can be found in many of today’s commercial baby products. Words such as hypoallergenic are pointless: these products can still contain these ingredients. Suncreams/block have also been found to contain compounds that mimic oestrogen (hormone) such as camphor. For safety, don’t use when pregnant.


For the latest reports on the possible causal link between breast cancer and exposure to parabens: [http://www.organatural.typepad.com/](http://www.organatural.typepad.com/) and click on the Nov 2009 link. There is enough evidence on this site to make you reconsider using deodorants and anti-perspirants. Using soap and water works equally well.
3. The Home
Thankfully, you have a lot of control over this last category, which is good, because your home is statistically more likely to expose you to a greater level of toxins than you will get from being outdoors. Common household dust is the main offender. Studies both in Europe and the US have shown that dust can typically contain over 100 compounds including hormone disrupting chemicals, pesticides, heavy metals, flame retardants, petrol additives, solvents, dead skin, both human and animal, bacteria and moulds, insect/dust mite body parts and faeces.

For example, a double sized mattress typically may contain millions of dust mites. Ten per cent of the weight of a two-year-old pillow is made up of dead dust mites and droppings.

It is nearly impossible to assess the effect of this in a study: all you can do is be aware of it and reduce your level of exposure. Even taking your shoes off when you enter your home can make a significant difference.

Around the home and garden you’ll find that the most toxic offenders include:
• Ammonia-based glass/mirror cleaners: ammonia toxicity is linked with long-term effects to the liver and irreversible lung damage.
• Chipboard: some is held together with urea formaldehyde glue. Even at tiny concentrations of 30 parts per million, it can be fatal. Severe eye and skin irritant and linked with increased nasal cancer.
• Metal polish; contains thiourea, a known animal and possible human carcinogen. Can cause intense allergic skin reactions.
• Paints and varnishes (oil-based): these emit noxious gases, such as toluene, linked to long-term liver and kidney damage and xylene, which may damage foetuses and affect bone marrow. Also contain alkyds, acrylics and alkyl phenols. The latter is a proven hormone disrupter. These chemicals can aggravate allergy and asthma sufferers. Even new ‘safer’ water-based paints have their problems as, although these are free from VOCs (volatile organic compounds), they contain more chemicals than oil-based paints. Strip paint is suspected to be lead-based. Use with care and not with a blowtorch – probably best to prepare and repaint.
• Shoe polish: contains solvent nitrobenzene, a suspected carcinogen. Affects CNS, producing fatigue and depression. May also contain methylene chloride, chronic exposure causing memory loss and kidney and liver damage.
• TVs and computers pre-late 70s: these gave off PCBs (polychlorinated biphenyls). Banned now, these compounds are very stable and can remain in the home for years. PCBs can affect thyroid hormone function and intelligence. US research in 1996 showed that infants exposed to slightly above average levels of PCBs in the womb were two years behind in their reading age by the time they were eleven.
• Water pipes: older houses built before 1970 were sometimes fitted with iron and/or lead pipes. Water companies are only legally obliged to comply with regulations up to the water main outside your property; the remaining pipe work is your responsibility. Water left standing in a pipe, as opposed to being flushed for a minute or two, tends to have the highest concentrations of metal readings, as it very slowly dissolves the pipes. Lead doesn't dissolve in hard water. Current limits set by the European Commission are:
  • 2.0mg/l (milligrams/litre) for Copper (Cu)
  • 25 mcg (micrograms/litre) for Lead (Pb)
  • 5,000 mcg/l for Zinc (Zn)
  • 200 mcg/l for Iron (Fe)
  • 20 mcg/l for Nickel (Ni)
A water test is generally free from your provider. N.B. Water filters are only good at removing heavy metals (such as lead) for the first 4-5 litres per filter. After which, they may probably only clear the ‘normal’ contaminants such as chlorine. If you have a borderline reading, flush the toilet first thing in the morning and then run the tap for a
minute or two. Flow rates are typically 4 litres/minute, which equates to 40 metres of pipe.

- Weedkillers (pesticides): Scottish terrier dogs that were allowed to lie on lawns treated with pesticides were found to have bladder cancer rates seven times higher than terriers that weren’t. Insect repellents are also very toxic.

**Table of Sources of Metal and Chemical Toxins**

<table>
<thead>
<tr>
<th>Aluminium</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Aluminium cans</td>
<td>Household detergents</td>
</tr>
<tr>
<td>Aluminium cookware</td>
<td>Herbicides</td>
</tr>
<tr>
<td>Aluminium dust</td>
<td>Industrial dust</td>
</tr>
<tr>
<td>Aluminium foil</td>
<td>Insecticides</td>
</tr>
<tr>
<td>Aluminium phospahte (in fertilisers)</td>
<td>Insulated wiring</td>
</tr>
<tr>
<td>Aluminium phospahte (in Kaopectate)</td>
<td>Medical compounds</td>
</tr>
<tr>
<td>American cheese</td>
<td>Milk products</td>
</tr>
<tr>
<td>Animal feed</td>
<td>Nasal spray (alum)</td>
</tr>
<tr>
<td>Antacids</td>
<td>Paris green</td>
</tr>
<tr>
<td>Automotive exhaust</td>
<td>Pesticides</td>
</tr>
<tr>
<td>Baking powder</td>
<td>Rat poisons</td>
</tr>
<tr>
<td>Beer/wine</td>
<td>Seafoods</td>
</tr>
<tr>
<td>Car parts</td>
<td>Table salt</td>
</tr>
<tr>
<td>Ceramics</td>
<td>Tobacco smoke</td>
</tr>
<tr>
<td>Cigarette filters</td>
<td>Toothpaste</td>
</tr>
<tr>
<td>Coloured chalk</td>
<td>Vanilla powder</td>
</tr>
<tr>
<td>Construction material</td>
<td>Vanilla powder</td>
</tr>
<tr>
<td>Deodorants</td>
<td>Water - city and well</td>
</tr>
<tr>
<td>Dental amalgams</td>
<td>Wallpaper dyes/plaster</td>
</tr>
<tr>
<td>Drinking water – city</td>
<td>Wood preservatives</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Arsenic</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ayurvedic medicines (some)</td>
<td>Paints</td>
</tr>
<tr>
<td>Burning of fossil fuels</td>
<td>Pesticides/herbicides/fungicides</td>
</tr>
<tr>
<td>Ceramic enamels</td>
<td>Printing (pigments used within)</td>
</tr>
<tr>
<td>Contaminated drinking water</td>
<td>Smelting industry</td>
</tr>
<tr>
<td>Herbal medicines (some Chinese)</td>
<td>Tobacco</td>
</tr>
<tr>
<td>Manufacture of glass and fireworks</td>
<td>Tanning (pigments used within)</td>
</tr>
<tr>
<td>Microelectronics industry</td>
<td>Textiles (pigments used within)</td>
</tr>
<tr>
<td>Mining industry</td>
<td>Wood treated with arsenic preservative</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cadmium</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Alloys - dental</td>
<td>Milk – evaporated</td>
</tr>
<tr>
<td>Batteries</td>
<td>Motor oil</td>
</tr>
<tr>
<td>Sweets/Candy</td>
<td>Oysters</td>
</tr>
<tr>
<td>Ceramics</td>
<td>Paint pigments</td>
</tr>
<tr>
<td>Cereals – refined</td>
<td>Pesticides</td>
</tr>
<tr>
<td>Cigarette smoke</td>
<td>Pipes, galvanised</td>
</tr>
<tr>
<td>Cisterns</td>
<td>Plastics, polyvinyl</td>
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<tr>
<td>Colas</td>
<td>Processed foods</td>
</tr>
<tr>
<td>Copper refineries</td>
<td>Rubber carpet backing</td>
</tr>
<tr>
<td>Electroplating</td>
<td>Rust-proofing</td>
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<tr>
<td><strong>Copper</strong></td>
<td><strong>Lead</strong></td>
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<td>-----------------------------------------</td>
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<tr>
<td>Beer</td>
<td>Industrial emissions /wastes</td>
</tr>
<tr>
<td>Chocolate</td>
<td>Insecticides</td>
</tr>
<tr>
<td>Copper cookware</td>
<td>Liver</td>
</tr>
<tr>
<td>Copper IUD's</td>
<td>Milk</td>
</tr>
<tr>
<td>Copper pipes</td>
<td>Nuts</td>
</tr>
<tr>
<td>Dental prosthesis</td>
<td>Oysters</td>
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<tr>
<td>Fungicides</td>
<td>Swimming pools</td>
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<tr>
<td>Hemodialysis</td>
<td>Water - city</td>
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<tr>
<td>Ice makers</td>
<td>Water - well</td>
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</tbody>
</table>
Nickel

<table>
<thead>
<tr>
<th>Baking powder</th>
<th>Food processing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combustion of fuel</td>
<td>Hydrogenated fats, oils</td>
</tr>
<tr>
<td>Dental work and bridges</td>
<td>Industrial waste</td>
</tr>
<tr>
<td>Exhaust – car</td>
<td>Stainless steel cookware</td>
</tr>
<tr>
<td>Fertilisers – superphosphate</td>
<td>Tobacco smoke</td>
</tr>
</tbody>
</table>

**Symptoms of Metal and Chemical Toxicity**

- Abdominal pain
- Abnormal hardening of bones
- Accelerated ageing
- Allergies
- Anaemia
- Anorexia
- Angina
- Birth defects
- Behavioural changes
- Blurred vision
- Brain damage
- Breath – shortness of
- Cellular damage
- Chemical sensitivities
- Colitis
- Concentration problems – difficulty
- assimilating new knowledge
- Constipation
- Daydreaming
- Disorientation
- Dizziness
- Dry skin
- Eyesight problems – sensitivity to bright
- light/night blindness
- Fatigue
- Fever
- Hair loss
- Insomnia
- Joint aches/pains in muscles
- Irritability
- Liver damage
- Loss of appetite
- Low blood pressure
- Lung damage
- Memory loss
- Metabolic problems
- Metallic taste in mouth
- Migraines
- Mineral deficiencies
- Nausea
- Nerve disorders
- Numbness/pains in the hands/feet
- Neurological disorders - panic, rage depression
- Paralysis
- Protein/sugar in urine
- Respiratory problems
- Seizures
- Sinus – chronic congestion
- Skeletal retardation
- Skin problems – crawling sensation
- Speech – difficulty finding words
- Throat - sore
- Tissue damage
- Teeth grinding
- Tumours
- Vitamin deficiencies
- Vomiting
SECTION 2: THE EFFECT OF BODY OVERLOAD ON HEALTH

It can be very hard assessing the impact that particular factors have played in your health problems. There may well be obvious factors that have played their role. For example, I picked up fever and jaundice of the liver in Turkey two years prior to becoming fully ill. My girlfriend and I were ill for a month. I also had green discoloration around the mouth, a gall-bladder issue. Two years later, I experienced a period of intense stress as my exam finals approached at University. I had also maintained an unhealthy diet of fast food, combined with excessive alcohol (spirits are more damaging to the liver than beer) and late nights. Also throw into this: amalgam fillings (I lost one tooth because it was mostly amalgam); stripping of and exposure to lead-based paints over many years decorating – and you have a recipe for disaster.

The body has a capacity much like that of an elastic band in that it can suffer ‘insult’ after ‘insult’ and is able to be ‘stretched’ for a long period of time, but then, all of a sudden, it snaps and your health – as in my case – deteriorates rapidly. Always listen to your body energy.

The build-up of toxins is often the one overlooked and the missing key that threads together all the other unexplained and diverse symptoms that an individual might be experiencing.

Effects of Chemicals and Metals

The huge increase of chemicals used in our environment, food and medicine – the use of mercury in vaccinations and until very recently dental fillings – all place a great challenge on our body's ability to rid itself of toxins.

Chemical and metal toxicity can cause a vast range of problems:

• Cellular damage. The ingestion of toxic metals destroys brain tissue and nerve cells by increasing cellular membrane permeability. This enables the leakage of nutrients out of the cells; it inhibits enzyme production; causes excessive free radical production, and decreases cellular energy.

• Chromosomal damage and genetic alterations.

• Hormonal problems.

• Damage to T-cell production and immune system functioning. This opens the gateway for all kinds of problems in the body: viral, parasitic and bacterial. With the body’s defence mechanisms impaired (see SECTION 4), the body can’t efficiently eliminate toxins.

• When toxins aren’t being metabolised and eliminated, the body transports them via the blood and stores them. And where does it store them? Within FAT CELLS in the body. And because heavy metals and chemicals are FAT-SOLUBLE, these toxins can be transported and stored to almost any organ or site(s) within the body. Some of the more common places where metals reside are in the Adipose (fatty connective) Tissue, Liver, the Gall-bladder (within the bile) and the Gastro Intestinal (GI) tract, whose villi are rich in fat cells (villi are the tiny finger-like processes that occur in the mucous membrane of the small intestine); and lastly the brain, which is 60% lipid in structure.

Let’s take a look at specific conditions and see how a toxic internal environment plays a role. I’ll start with Chronic Fatigue Syndrome (CFS). (I would advise you to read about each condition because there are a lot of similarities in symptomology.)
**Similarity of Symptoms**
You will start to see how similar the symptoms for the following illnesses that I cover in this eBook (Irritable Bowel, Candida, etc) are to symptoms of metal or chemical toxicity. For CFS to be diagnosed, at least four of the following symptoms must have been present for a minimum of six consecutive months with a history of previous well-being.

**Chronic Fatigue Syndrome**
The American Centre for Disease Control defines CFS as “The presence of unexplained persistent fatigue that is not relieved by rest and that results in a substantial reduction in occupational, social and personal activities.”

**Symptoms of Chronic Fatigue Syndrome**

<table>
<thead>
<tr>
<th>Concentration difficulties</th>
<th>Muscle pain or weakness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eyesight problems – lost vision, focus, sensitivity to bright light</td>
<td>Neck or armpit lymph nodes tender</td>
</tr>
<tr>
<td>Headaches</td>
<td>Post-exertional malaise lasting more than 24 hours</td>
</tr>
<tr>
<td>Joints – painful (without swelling)</td>
<td>Sleep – does not refresh</td>
</tr>
<tr>
<td>Irritability – above normal</td>
<td>Throat - sore</td>
</tr>
<tr>
<td>Memory loss (short-term)</td>
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</tr>
</tbody>
</table>

The traditional medical community has not been able to define a cause of CFS but makes these key observations:

1. **Neuro/Hormonal factors**

There is a high incidence of abnormalities in the hypothalamus, pituitary and adrenal glands of people suffering from CFS. The HPA glands are a major component of the body's response to stress.

The hypothalamus is located in the brain, where it physically interacts and stimulates the pituitary gland through the release of the corticotrophin-releasing hormone (CRH). (Hormones are the chemical messengers that are sent from glands/organs/cells to target cells, which then carry out specific actions.)

The pituitary gland governs the endocrine system, where hormones are sent via the blood. Hormones that are produced by the pituitary control other glands' activities at distant sites throughout the body. As an example, liberation of the adrenocorticotropic hormone (ACTH) in the bloodstream by the pituitary gland commands the adrenals to secrete cortisol. Cortisol is a glucocortical hormone, also referred to as the 'stress hormone'. Its role is to mobilise the glucose reserves so that the body can respond quickly to a challenging situation. Both CRH and cortisol influence the immune system negatively. Additionally, it can suppress inflammation.

CFS has been associated with smaller adrenal glands and mild signs of adrenal failure, as well as reduced levels of related hormones, which is found in almost half of CFS sufferers. The CRH and cortisol levels are generally low, although still in the normal range, in these patients. Lower levels of CRH and cortisol are known to result in extreme fatigue, decreased plasma volume, myalgias, arthralgias, fever, allergic responses, as well as mood and sleep disturbances, all common symptoms in CFS.

2. **Immune System Misfunction**

A decreased number and activity of the immune system’s natural killer cells are sometimes seen in CFS. In other cases, the Ribonucleic acid (RNAse) antiviral pathway is impaired, opening the door to infections. Other patients have a higher level of infection-fighting CD8+ T-cells combined with a lower count of suppressor T-cells, leading to an exhausting immune overactivity.
3. Free Radical Damage

Free radicals are molecules with an impaired electron. They are very unstable and react quickly with neighbouring molecules from which they try to steal the missing electron. An accumulation of free radicals inside the cell can produce a mass of oxidation reactions, ending in serious damage to the cell. Free radicals arise during normal metabolic activities, so the cell has evolved antioxidant defences to handle them; but the cell defence system can become overwhelmed by excessive oxidative assaults generated by environmental factors, e.g. insufficient nutrition, during an illness. (See SECTION 4.)

Mitochondria, which are found within cells and act as the cells’ engines by taking in food and converting it into energy, can also be affected, adding to this oxidative stress phenomenon because they release additional oxidants. Signs of oxidative stress involvement include a high level of oxidative damage to DNA and lipids. (DNA is found in the cell nucleus and holds all our genetic information or codes that make us unique from each other.)

Symptoms of CFS are similar to those produced by viral infection: sudden onset of illness; high levels of antibodies to many viruses. But if CFS is viral in origin, then why can no single pathological agent be determined and why does it appear sporadically and not spread on contact? The answer is because heavy metal and/or chemical toxicity aren’t contagious. All of the above observations can be attributed to the effects of heavy metal and/or chemical toxicity from hormonal imbalances, altered immune system functioning and cell damage from free radical activity.

Research conducted at Ohio State University has found that patients with long-term CFS after Epstein-Barr virus infection showed depressed activity of an enzyme called delta 6 desaturase. (An enzyme is a protein that helps speed up chemical reactions.) This enzyme is essential because it converts essential fatty acids (such as omega-3 and omega-6) which we get by eating fats in our diet, into gamma lineoic acid (GLA).

In a clinical study at the University of Glasgow, patients with post viral fatigue syndrome who were given activated essential fatty acids had a statistically significant reduction in their fatigue compared to the control group who were given a placebo (harmless control substance).

GLA is rarely found in food but is crucial in the production of eicosanoids, which are made by every living cell in the human body and are like super hormones which control all our hormonal systems: the immune system, the cardiovascular system, the central nervous system (CNS) and the reproductive system.

The point of all this is that it may be that CFS is the result of an underproduction of GLA, so having a sufficient level of GLA in your cells could help fight off viruses. It’s also known that stress affects GLA formation. When you get stressed, it has a dramatic effect upon your body. This is because the body responds by increasing the amounts of the hormones adrenalin and cortisol into the blood. The adrenalin decreases the activity of the enzyme that helps make GLA, so that’s bad, and the cortisol increases the level of insulin in the blood, which not only increases the production of harmful eicosanoids but, as you’ll find out in SECTION 5, it also stops fats from being broken down in the body and toxins being released. The detox works by repairing the cell membrane through supplements and by eating quality fats such as flaxseeds, nuts, cold pressed olive oil and coconut oil.

It is possible to dismiss all of this but, as far as I’m aware, the conventional way to treat CFS has been with formulas that have been specifically designed to aid adrenal functioning and strengthen the immune system. I tried this path and, as I found out, you may get an improvement in energy but without removing the SOURCE that is
CAUSING all those imbalances: heavy metals and/or chemicals. No amount of adrenal supplements will SOLVE the problem. The next condition is common in those who have CFS.

**Irritable Bowel Syndrome**
Irritable bowel syndrome (IBS) is a condition that has been defined by UK NHS as “a chronic disorder, featuring recurrent abdominal pain and intermittent diarrhoea, often alternating with constipation.”

It is estimated that between 10 and 20% of the population suffers from IBS, possibly more, because people don’t tend to seek medical advice for this condition. IBS is also known as spastic colon, spastic colitis and mucous colitis.

**Symptoms**
For a diagnosis of IBS to be made, you should have suffered abdominal discomfort or pain for which no other cause is found, for at least three months in the last 12. The three months need not be continuous but may be a total. You should also show at least two of the following three features:

1. Pain is relieved by defecation (opening the bowels).
2. Pain is associated with a change in the frequency of bowel movement, either an increase or a decrease.
3. There is a change in the form of the stool: it is watery, loose or pellet-like.

Diagnosis is made when full medical investigation, including a rectal examination, a barium meal X-ray and possibly a colonoscopy (using a tube with a camera in it), show no other abnormalities or any underlying cause.

**Symptoms of Irritable Bowel Syndrome**

| Abdominal pain, spasms, swelling, tenderness | Headache |
| Anxiety/depression | Nausea |
| Bad breath | Noises – loud abdominal rumblings and squeaking |
| Bloating | Rapid transit of food |
| Burping | Sense of fullness |
| Diarrhoea, often alternating with constipation | Sense of incomplete emptying after using toilet |
| Excessive gas production | Tiredness |
| Incontinence | Vomiting |

Bowel contents from the small intestine are moved along through the large intestine or colon (see Fig.1) by the process of peristalsis, the rhythmical tightening and relaxation of segments of the intestine. With IBS sufferers, peristalsis is stronger and more frequent than normal. The stools are often ribbon-like or pellet-like and may contain mucus. (If they contain blood, please seek medical attention.)

**Causes**
Just like CFS, the precise cause of IBS is unknown, but conventional medical wisdom notes that IBS often begins during a period of emotional stress, and symptoms worsen in stressful situations. Up to 60% of people with the syndrome have psychological symptoms such as anxiety and depression.
IBS Not All In The Mind

IBS can also develop after a gastrointestinal infection, and an increased sensitivity or intolerance to certain foods can also contribute. What happens is that the colon muscle of a person with IBS begins to spasm after only mild stimulation and is more sensitive and reactive than usual. The chemical transmitter that mediates the change to pressures within the bowel has been identified as serotonin, a chemical found in the brain as well as in the bowel.

Ninety-five per cent of serotonin is made in the bowel, where it is involved in the contraction of the smooth muscle in the bowel wall. The exact mechanism is not known, but serotonin receptors are thought not to function properly in IBS.

Treatment
Typical treatment revolves around changing the diet to include more fibre (fruits, vegetables, breads and cereals regulate bowel action and prevent constipation – fibre intake to be slowly increased over a few weeks to avoid gas) and to exclude fatty and/or highly-spiced foods, gas-producing vegetables such as beans, milk products in lactose-intolerant people, wheat, corn, chocolate and excess alcohol. Reducing intake of caffeine and eliminating products containing sorbitol (an artificial sweetener) are also suggested.

Antispasmodic or antidiarrhoeal drugs can also be prescribed, and for constipation the sufferer is advised to take an osmotic laxative, which is preferred over stimulant laxatives. For those with severe pain, anti-depressants can also be used to block the transmission of pain from the gut to the brain.
According to the NHS, there is evidence that acupuncture, peppermint oil capsules (used in this detox below) or Chinese herbal medicine may be helpful. Surveys of the available scientific research suggest that being taught a self-hypnosis technique could also help to relieve the symptoms in some people. This is because depression and anxiety may cause the colon to overreact and increase IBS symptoms.

Here again, all the attention is spent on trying to relieve the symptoms of IBS. Pain or dis-ease is a sign that you need to identify the cause of the problem, NOT mask the symptoms with drugs.

Research shows that people with IBS have a much lower threshold for intestinal pressure or pain, and that the nerve endings in the rectum and perhaps throughout the GI tract may be more sensitive. It is often not realised that the bowel has the highest concentration of nerve endings second only to the brain. That is also partially why stress and anxiety can aggravate the symptoms.

The question is why do we get constipation and diarrhoea? And why is there increased sensitivity? This is really the same as asking why is there irritation within the large intestinal wall?

If you have eliminated the common causes of constipation which are:
• Not enough liquids (remember drinks with caffeine such as colas, tea, coffee and alcohol are dehydrating)
• Lack of exercise
• Pharmaceutical drugs: pain medications; antacids that contain aluminium and calcium; blood pressure medications (calcium channel blockers); anti-Parkinson drugs; anti-spasmodics; anti-depressants; iron supplements; diuretics; and anti-convulsants
• Changes in life/routine (pregnancy, older age, and travel)
• Abuse of laxatives
• Ignoring the urge to have a bowel movement
• Specific diseases such as stroke (by far the most common)
• Problems with the colon and rectum
• Problems with intestinal function (chronic idiopathic constipation)

...and if you have also eliminated the common causes of diarrhoea, which are usually caused by temporary infections such as:
• Bacteria consumed through contaminated food or water, such as: Campylobacter, Clostridium difficile, Escherichia coli, Listeria monocytogenes, Salmonella enteritidis, Shigella
• Parasites which can enter the body through food or water and settle in the digestive system such as: Cryptosporidium parvum, Cyclospora cayetanensis, Entamoeba histolytica, Giardia lamblia, microsporidia
• Viral infections which can cause diarrhoea such as HIV, rotavirus, Norwalk agent or
• Medicines such as antibiotics, blood pressure medications and antacids containing magnesium
• Intestinal diseases, such as inflammatory bowel disease, Crohn’s disease or Celiac disease (a wheat protein intolerance)
• Food allergies such as lactose intolerance where you lack the enzyme lactase to digest lactose, the sugar found in milk
• Diabetes, thyroid and other endocrine diseases
• Food additives (sorbitol, fructose, and others)

...then, it is likely that you may have parasites or a bacterial imbalance that is more persistent. It is also likely because of faulty immune system response that a range of particular foods is irritating the lining of the bowel. The main offenders are milk, sugar
and wheat, which you will avoid on the detox. Allergic food responses are more typical in people who have what is known as ‘leaky gut’ syndrome - see the Candida section.

Constipation can either result from faeces that are overly packed together or from where there are old hardened faeces stuck to the walls of the bowel that don't pass out with regular movements. Normal faeces are roughly 75% water and 25% solids.

The bulk of faecal solids are bacteria and undigested organic matter and fibre. On average, most people have up to ten to twelve pounds of waste matter stuck to the inner walls of the colon. This old faecal matter can build up in pockets and coat the entire length of the colon, blocking absorption of vital nutrients. Toxins from putrefying deposits are then absorbed by the blood capillaries lining the colon wall and passed into the bloodstream, which feeds our body tissues and organs. As well as this, faecal matter also creates an ideal breeding ground for harmful bacteria and parasites.

Because ordinary bowel movements are unable to remove this waste, laxatives are sometimes used. These only irritate the colon, causing the bowels to move in an attempt to pass the laxative and anything else free enough to flow out. In addition to this, once the laxative has passed through the colon, the bowels still remain sluggish, and all that's achieved is a weakening of the colon and a dependency on laxatives (which may contain mercury).

Chronic diarrhoea is most often due to an irritation in the colon. Diarrhoea results when an inflamed colon pours out fluid and mucus in an attempt to flush out and repeatedly empty itself of whatever it can force out, whether it's food allergens or parasitic worms trying to infiltrate the intestinal wall. Because we know that irritation can be caused by food allergies or intolerances throughout the small and large intestines, this explains why IBS often begins during a period of emotional stress as the immune systems are under fire. (See Allergies SECTION 2 below.)

Irritation also results from the presence of heavy metals in the mucosal tissue of the colon wall, where long-term activity of particular bacteria, viruses, parasites and fungi can also be causing irritation. The detox is designed to eliminate these toxins and pathogens from all the places where they normally accumulate, i.e. the tissue, brain, liver/gall-bladder and the GI tract. Part of the detox process involves using enemas to clean the bowel. (See SECTION 5.)

In the light of the known link between alterations in hormonal function and the effect that chemical and metal toxicity can have, it is worth quickly mentioning that the whole digestive process is itself controlled by hormones: gastrin, secretin, and cholecystokinin (CCK) are released by cells in the stomach and small intestine and stimulate digestive juices and cause organ movement, and ghrelin and peptide YY which stimulate and inhibit appetite respectively.

Two types of nerves also help to control the action of the digestive system. One releases the chemical acetylcholine which causes the muscle of the digestive organs to squeeze with more force and increase the ‘push’ of food and juice through the digestive tract, and adrenalin, which relaxes the muscle of the stomach and intestine and decreases the flow of blood to these organs.

Obviously, it’s difficult to measure the exact effect that toxicity has upon hormonal functioning and digestion especially when it’s more than likely that there are digestion enzyme deficiencies from poor vitamin and mineral absorption as well. However, the detox addresses this through heavy metal removal, parasite elimination, vitamin and mineral supplementation and probiotics to repopulate the bowel with beneficial bacteria. The next topic can also be a factor in IBS – this was the situation in my case.
Candida Albicans
Candida Albicans is a member of the yeast family; more specifically it belongs to the family of plants known as fungi or moulds. It is a natural part of our body’s flora. Its food source is almost any organic living or deceased substance, and it predominantly resides in the digestive system. It can also exist in the vaginal region, the mouth and throat and on the skin or in nail beds.

Normally, it obtains its nutrients via the use of enzymes but it can also take on what is known as a mycelia fungal root form. In this case, the roots (hyphae) penetrate the cells of the protective mucosal lining of the intestines. Known as ‘Leaky Gut’ syndrome, this situation enables undigested protein and toxic waste from the fungal infestation to ‘leak’ into the neighbouring tissue and bloodstream, and this can produce unpleasant symptoms, which explains the tendency for some people to feel a whole lot worse after eating. Quite literally, these toxins reach the brain.

I am not in any doubt as to the ability of this yeast to cause a wide range of physical and mental symptoms - this view is shared among the alternative health community. However, because this yeast is found in over 90% of the population, the typical response of a gastro-enterologist, as I found out, is that unless the overgrowth of this yeast is life-threatening, or you have HIV or a severely suppressed immune system, there is cause to dismiss its involvement in any of your unexplained symptoms. This is a mistake.

The results that have been achieved by detoxing chemical and heavy metals and clearing up individuals’ symptoms through the use of supplements and dietary changes are in themselves not only a confirmation of this yeast’s ability to proliferate within the gut and beyond but also a confirmation that it does cause very real symptoms:

Symptoms
The following symptoms relate both to candida overgrowth and its mycelial root form. A more detailed look at the root form known as ‘Leaky Gut’ syndrome follows.

Symptoms of Candida Albicans

<table>
<thead>
<tr>
<th>Symptom</th>
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<tbody>
<tr>
<td>Abdominal bloating</td>
<td>Irritability</td>
</tr>
<tr>
<td>Abdominal pain</td>
<td>Joint aches</td>
</tr>
<tr>
<td>Acne</td>
<td>Listlessness</td>
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<tr>
<td>Allergies</td>
<td>Loss of libido</td>
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<tr>
<td>Anxiety</td>
<td>Menstral problems</td>
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<tr>
<td>Blurred vision</td>
<td>Migraines</td>
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<tr>
<td>Chemical sensitivities to perfumes,</td>
<td>Muscle pains</td>
</tr>
<tr>
<td>paints, tobacco smoke</td>
<td>Nausea</td>
</tr>
<tr>
<td>Colitis</td>
<td>Numbness</td>
</tr>
<tr>
<td>Concentration problems</td>
<td>Odd feelings after eating certain foods</td>
</tr>
<tr>
<td>Constipation</td>
<td>Rectal itching</td>
</tr>
<tr>
<td>Cystitis</td>
<td>Sinus – chronic congestion</td>
</tr>
<tr>
<td>Depression</td>
<td>Skin problems – itching/inflammation</td>
</tr>
<tr>
<td>Diarrhoea</td>
<td>Spaced-out/feelings of</td>
</tr>
<tr>
<td>Dizziness</td>
<td>Sugar cravings</td>
</tr>
<tr>
<td>Fatigue – chronic</td>
<td>Symptoms worsen in damp</td>
</tr>
<tr>
<td>Flatulence</td>
<td>symptoms worsen after eating sugar</td>
</tr>
<tr>
<td>Gynaecological problems</td>
<td>rich foods</td>
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<tr>
<td>Heartburn</td>
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</table>
Symptoms of Leaky Gut
Digestion involves the chemical breakdown of food molecules into smaller molecules that can be used by cells. The breakdown occurs when certain specific enzymes are mixed with the food. The end products are Glucose (carbohydrate) and Amino Acids (proteins) which move into the intestinal cells, then out where they are picked up by capillaries to go on and be used in the body’s cells.

Glycerol and fatty acids. These are produced by the digestion of fat and enter the villi in the intestinal lining and are reassembled into fat (triglycerides).

The problem occurs when larger molecules such as yeasts and bacteria ‘slip’ through the intestinal lining and also enter the bloodstream along with other nutrients. They can be very damaging once they enter the bloodstream, as they can find their way into individual organs such as the gall-bladder/liver.

Symptoms that occur are:
• Allergies. The immune system, once overloaded, as it encounters so many foreign particles, starts to attack more common substances in the environment, such as food molecules.
• Muscle pain and stiffness. The bacteria/fungi attach themselves to the soft tissue cells and are then attacked by the immune system. NSAIDs steroids are typically prescribed for this, but these actually increase gut permeability. The pain is usually worse in the early morning, since there is less blood flow when sedentary in bed.
• Joint pain. This is similar to muscle pain, yet the bacteria/fungi affix themselves to the tissues in the joints.
• Malabsorption. When the small intestinal wall is damaged, it is not able to absorb nutrients as efficiently. This can lead to a range of problems including fatigue; insulin and blood sugar problems and mood swings; temperature regulation problems; and vitamin and mineral deficiencies.
• Spaced-out feelings. The toxins given off from the metabolic activity of yeasts is not entirely cleared through the liver and the lymphatic and immune systems and (re)circulates in the blood, reaching the brain as neurotoxins.

Causes of Candida
The causes for the proliferation of candida can be due to a number of factors that may have been present to ‘feed’ the yeast and provide it with an environment where it can thrive and dominate over and above the body’s natural defences. Impairment of the body’s immune system response can be due to a number of factors:
• The widespread use of broad-spectrum antibiotics. These drugs attack bacteria in the intestine including the beneficial bacteria that maintain the balance of intestinal flora. (N.B. Unless your meat is organic or free range, there may be antibiotics or hormones present. Organic meat may be too expensive but one free range meat producer I spoke to reported that animals treated with antibiotics are ‘set aside’ so as to allow antibiotics time to leave the animals’ systems if they are to be culled. (Check with your meat supplier.)
• Prolonged periods of stress and anxiety and the depletion of vital minerals and nutrients necessary for the immune system to function efficiently.
• Further nutritional demands are placed upon the body from cigarette smoke, air pollution, alcohol, high caffeine intake in the form of tea, coffee and chocolate.
• The reliance on a nutrient deficient carbohydrate/sugar rich diet.
• Use of the contraceptive pill for prolonged periods of time.
• Increased use of steroids, including ointments. All steroids, including those present in the contraceptive pill, have a depressing effect upon the immune system.
• The presence of heavy metals, such as lead, cadmium and mercury. (N.B. Mercury was used in dental amalgams until very recently, typical content being around 50% of the amalgam filling.)

This last factor is crucial to grasp. While all of the above factors contribute in producing an acidic and anaerobic (without oxygen) environment that is ideal for yeasts to grow, metal toxicity may cause the greatest problem when attempting to eliminate candida. There is, again, some dispute over this.

Some nutritionists and doctors I’ve spoken to dismiss this because of the limited evidence of yeasts binding to heavy metals. However, others believe that candida affects the intestines’ natural self-protecting mechanism, the mucosal lining, and this enables toxic metals to remain in the GI tract.

This makes more sense. Remember, the villi are the tiny finger-like processes that absorb nutrients and occur in the mucous membrane of the small intestine. These villi are rich in fat cells. As a result of heavy metal toxicity in the intestinal lining, the lining produces more mucus to act as a barrier to block the absorption of metals into the blood. This increased mucus production creates an anaerobic environment, which is ideal for bacterial activity and yeasts to thrive in. N.B. In healthy individuals the stomach and proximal small intestine contain few micro-organisms, which is mainly due to the bactericidal activity of gastric acid.

Robert B. Johnson DMD, ND, MT suggests that many times when the heavy metals are removed from the body, yeast drops significantly. And that it is now understood that the body is able to use yeast to bind to heavy metals and render them inactive. Less damage to your health is done with high levels of yeast than heavy metals, so it is thought that the body uses higher levels of yeast to protect itself from dangerous toxins.

And further comments from the Stanford Genome Technology Centre clearly state: "Detoxifying whilst modifying the diet is one sure-fire way for eliminating candida, especially when few classes of drugs are effective against these fungal infections, and all of them have limitations with regard to efficacy and side-effects.”

Therefore, the main point to realise is that you won’t be able to eliminate candida unless you eliminate heavy metals first. If you don’t, the yeast will simply re-establish a foothold again and flourish. That is why for years I personally never had any success in trying to eliminate candida as I made changes to my diet and avoided carbohydrates/sugar. That is also why, short of a life-threatening situation with regard to candida and drug therapy being essential, that the use of pharmaceuticals in less extreme cases may offer temporary relief but will not address the root problem. That is the environment which has enabled the yeast to thrive in the first place.

In fact, due to the acidic nature of drugs, they may well be actually contributing in maintaining an acidic and anaerobic (oxygen-starved) environment. This is because yeasts survive by fermentation, usually in the absence of oxygen. Think of brewer’s yeast fermenting sugar (which breaks down into ethyl alcohol) and you can get an idea of the process.

As far as probiotics are concerned where you orally take capsules ‘to put the healthy bacteria back’, a few pointers:
• The vast majority doesn’t work.
• You have to remove metals first to change the acidic anaerobic environment.
• The probiotics have to have certain specific qualities (see SECTION 5).
**Bacteria and Parasites**

When the immune system is overloaded either through viral exposure or toxic metals and/or chemicals and your body becomes overwhelmed, it is easy for parasites and bacteria to get a foothold. This is not surprising, as we are all exposed to them on a daily basis.

**Bacteria**

Bacteria are single cell organisms that can have either a harmful or a beneficial effect upon the body. Bacteria that have a harmful effect can act as pathogens and cause tetanus, typhoid fever, pneumonia, syphilis, cholera, tuberculosis and food borne illness. Beneficial bacteria, on the other hand, e.g. E. coli, produce vitamins (including vitamin K) that are absorbed back into the bloodstream along with water and salts. (N.B. When water is not absorbed from the colon, diarrhoea can result, causing dehydration and ion loss.)

Currently, there are over 500 different types of bacterial micro-organisms in your *colon* breaking down undigested matter that has escaped absorption in the small intestine. This balance in the intestinal flora between beneficial and potentially harmful bacteria can alter.

Normally, there is more limited bacterial activity occurring in the small intestine. However, harmful bacteria or yeast can become present and cause problems, such as with the yeast candida albicans (see section above). The Fermentation of sugars in the small intestine can produce poisonous gases such as ammonia, formaldehyde, and acidic chemicals that are absorbed into the bloodstream through the intestinal wall. (Itching skin after eating can be caused by this poison gas.) Additionally, as a result of this fermentation process, higher amounts of chromium, zinc, magnesium and oxygen are used, which deplete these minerals.

Unhealthy bacteria such as spirochetes, as well as viruses and dinoflagellates (algae which produce nasty toxins), can colonise your liver and its biliary system, causing the synthesis of very long-chain saturated or renegade fats that lead to liver toxicity, biliary congestion, impairment of prostaglandin (hormone) synthesis and the release of glutathione (an essential antioxidant/detoxifying agent).

In order to correct the imbalances in intestinal flora, the detox requires a sugar-free low-carbohydrate diet to be followed, along with the use of special bacterial probiotics. (See SECTION 5.)

**Parasites**

Parasites are often unrecognised in diagnosing health problems, yet there are over 100 different types that can live in human hosts. These organisms derive nourishment and protection from other living organisms known as hosts. They live and reproduce within the tissues and organs of infected human and animal hosts, and are often excreted in faeces. Intestinal parasites take up residence in the GI tract and quite literally rob the host of nutrients and produce toxic waste. Parasitic infections also tend to be common in individuals with chemical and metal poisoning, and these can be a reflection of lowered immune status.

On average, in one American clinic, they found 80% of patients who had abdominal inflammation and unrelated aches and pains, had one or more parasites living in them.

If untreated, they can cause a range of illnesses from mild discomfort to debilitating illness and possibly even death. There are a lot of alternative health practitioners who believe that parasites may be responsible for some serious diseases, such as cancers and HIV/AIDS. Typically, however, their effects are usually a lot less significant but still
enough to be able to cause consistent ongoing health problems for many years in some individuals.

Parasitic worms are prolific breeders: they can release tens of thousands of eggs at a time. It is the eggs or the freshly-hatched larvae that we accidentally pick up through, for example, walking barefoot or by putting anything into our mouths that has touched the faeces of an infected person or animal.

Parasites are also transmitted from host to host through ingesting undercooked meats, contaminated water or foods e.g. fruits, vegetables, grains, poultry, fish or meat. Insects can also transmit parasites, malaria from mosquitoes being a good example.

There are four different types of parasites:

1. **Single-celled protozoans** are microscopic in size and permeate our environment, killing and harming more people worldwide than any other parasitic type. Many people have been exposed to these protozoans, but their immune systems keep the organism under control. Those with weakened immune response, or those under trauma and stress have difficulty in fighting off these parasites. Most are able to produce cysts (closed sacs) in which they may be safely transported through food and water from one person to another. In the cyst state, protozoans are resistant to heat and chemicals, making them safe from destruction by human digestive juices and usually the most infectious to the host. Through their rapid ability to reproduce they can take over the intestinal tract of their host and spread to other parts of the host, causing tissue damage to their hosts. **Common protozoa** include Giardia duodenalis, Cryptosporidium parvum, Giardia lamblia, Cyclospora cayetanensis, Endolimaxnana, Trichomonas vaginalis, Toxoplasma gondii, Plasmodium malariae,

2. **Roundworms** are multi-cellular parasites that exist worldwide, particularly in warmer climates and include hookworms and pinworms which can reach the size of a pencil. They are most common in areas of poor sanitation. The adult worms multiply by producing eggs (ova or larvae). Infection begins with the ingestion of eggs that are usually present in soil or on fruits/vegetables grown in contaminated soil, or in an intermediate host, before humans are infected. Many people don't show signs of disease unless they're infected by many worms. In fact, it is possible that the human host can coexist comfortably with a few worms, unless they reproduce in great numbers and create organ obstruction. Children are more prone than adults because they tend to put soiled hands in their mouths. **Common roundworms** include Trichinella (Trichinella spiralis), Roundworm (Ascaris lumbricoides), Hookworm (Ancylostoma duodenal), Pinworm (Enterobius vermicularis), Heart worm (Dirofilaria immitis) and Strongyloides (Stronglyoides stercoralis).

3. **Tapeworms** are common throughout the world. They are long, flat, ribbon-like creatures with a scolex (head) that attaches to the intestinal wall. As long as the head remains attached to the intestinal mucosa, a new worm can grow from it. Tapeworms don't have digestive systems, so they obtain their nourishment through their whitish transparent skin, absorbing partially-digested substances from the host, especially vitamin B12 and folic acid. **Common cestoda** include Pork tapeworm (Taenia solium), Fish tapeworm (Diphyllobothrium latum) and Beef tapeworm (Taenia saginata).

4. **Flukes** are leaf-shaped flatworms that are classified into four types: liver flukes, blood flukes, lung flukes, and intestinal flukes. They have two suckers that enable them to attach to their hosts. Infection usually results from eating raw or undercooked fish or seafood; from eating infected vegetation such as watercress, water chestnuts, or from drinking or wading in infected water. Once inside the body, they end up in various organs, causing inflammation. Flukes release eggs that have tiny spines and so
can cause great damage as they pass through the body’s digestive or urinary tract. The worms also release toxic substances that can damage the host’s tissue. **Common flukes** include Intestinal fluke (Fasciolopsis buski), Blood fluke (Schistosomiasis japonicum, Schistosoma mansoni, Schistosoma haematobium), Liver fluke (Clonorchis sinensis) and Oriental lung fluke (Paragonimus westermani).

**Symptoms of Infection**

<table>
<thead>
<tr>
<th>Abdominal wind/gas</th>
<th>Headaches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anaemia</td>
<td>Insomnia</td>
</tr>
<tr>
<td>Appetite loss/changes</td>
<td>Irritable bowel</td>
</tr>
<tr>
<td>Arthritis</td>
<td>Joint pain</td>
</tr>
<tr>
<td>Blisters on lip inside mouth</td>
<td>Lethargy</td>
</tr>
<tr>
<td>Bloating</td>
<td>Malabsorption</td>
</tr>
<tr>
<td>Blood sugars swings – huge</td>
<td>Memory loss</td>
</tr>
<tr>
<td>Brain fog</td>
<td>Mineral imbalances</td>
</tr>
<tr>
<td>Concentration difficulties</td>
<td>Muscle pain</td>
</tr>
<tr>
<td>Constipation</td>
<td>Nausea</td>
</tr>
<tr>
<td>Cramps</td>
<td>Nose – runny</td>
</tr>
<tr>
<td>Dermatitis</td>
<td>Rectal itching at night</td>
</tr>
<tr>
<td>Diarrhoea</td>
<td>Restlessness at night</td>
</tr>
<tr>
<td>Digestion poor</td>
<td>Skin rash</td>
</tr>
<tr>
<td>Dry cough</td>
<td>Teeth grinding</td>
</tr>
<tr>
<td>Fatigue</td>
<td>Weight loss</td>
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</tbody>
</table>

Again the detox is geared towards ridding the body of pathogens including parasites. (See SECTION 5 for details.)

**Allergies**

Allergies are due to an overactive immune system and are universally recognised as an inappropriate immune system response that is out of proportion to the offending allergen. Food allergies are also unhelpfully classed as a psychosomatic illness by Western doctors.

The proportion of the population now suffering from allergies has been gradually rising over the last few decades. By conventional medical logic I assume that means we’re all becoming more neurotic? Complete nonsense.

**Symptoms**

An allergen is any substance that produces an allergic reaction. Allergens can make contact with your skin or the lining of your lungs, mouth, gullet, stomach or intestine. Symptoms can range from being quite mild to life threatening e.g.

- Runny nose and eyes with sneezing (hay fever/allergic rhinitis)
- Inflamed skin (dermatitis)
- Raised red patch or weal on the skin (urticaria)
- Vomiting, diarrhoea and abdominal pain
- Dangerous swelling of the lining of the voice box (larynx)
- Narrowing of the air tubes of the lungs (asthma)

Allergic symptoms to food usually occur within a few minutes to an hour after ingesting the causative food but can take up to twelve days.

Eight foods cause the majority of all allergic reactions:

1. Milk
2. Egg
3. Wheat
4. Peanut
5. Soy
6. Tree nuts (almonds, walnuts, pecans, etc.)
7. Fish
8. Shellfish

Symptoms can be similar to those of IBS, and food intolerance occurs when the body can’t adequately digest a portion of a particular food, usually because of a chemical enzyme(s) deficiency.

**Immune Response Mechanism**

One way to picture how your body handles allergies is to try to think of your body as being like that of a water barrel that collects rain. The rain water level represents the level of antigens that you are exposed to, such as dust mites, cat dander, pollen or pesticides residues on foods. On any given day, the total level of rain may be well below the rim of the barrel and no allergic reactions are experienced. But, as the level of water in the barrel starts to increase (the level of antigen exposure), some allergic symptoms start appearing. Finally when the level of exposure gets too great, the water overflows from the barrel, producing all the symptoms of an allergy attack.

Stress, emotional (or otherwise), how depressed an individual is, the frequency of repeated exposure, all have a direct effect upon the level of immune functioning and response. That is why on certain days an exposure to the same level of antigens produces no reactions but on other days it does. You might have noticed this with pet allergies.

People that have allergies tend to produce higher than normal quantities of an antibody called immunoglobulin class E (IgE), which is a molecule of protein. Allergic people also produce a more than normal number of mast cells. IgE molecules attach themselves onto the outside of mast cells at special points called receptor sites. When an allergen such as a pollen grain comes along, it attaches itself to two or more of the IgE molecules. The membrane of the mast cell is then distorted and tears.

Each mast cell contains an arsenal of a thousand or more large, globular granules, some of which include histamine, which can have a number of effects when released, such as making the smooth muscles contract in the walls of the air tubes of your lungs; increasing the leakage of fluid from small veins, so that membranes swell; and stimulating mucus and watery secretion from your nose lining, which cause local itching and burning. (More detail on the immune system can be found in SECTION 4.)

**Allergens**

There are thousands of allergens, including the obvious ones such as foods, food additives, dust, pollen, pet dander, washing powders, but there are also some others not widely known about including:

- Green coffee beans
- Dust from tea and various kinds of bean, including coffee
- Spores from mouldy cheese
- Mushroom compost
- Weevil-infested wheat flour
- Dust, powders or pulp from wood, cork or tobacco.
- Irritant gases and fumes e.g. soldering and smoke
- Silk, cotton and dyes
- Resins and gums, solvents and paint
- Chemicals used in hairdressing, or isocyanates, formaldehyde or salts of chromium, nickel, cobalt, platinum and vanadium
- Animal products, especially urine
• Various drugs, especially antibiotics, cimetidine and piperazine, or drugs in powder form
• Plants
• Biological enzymes
• PVC

**Prevention and Treatment**

Typical health guidelines suggest repeated exposure tends to make allergies worse, so avoiding the known allergen is suggested. This isn’t particularly helpful when you’re faced with huge numbers of allergens, as I was. Fortunately, living in a bubble is not the only solution. Being paranoid about your environment is also a waste of energy.

Detoxing in itself takes a lot of energy, and energy wasted in faulty immune responses is best avoided if possible (this can be exhausting). I tried the hospital consultant’s recommendations of keeping a food diary to identify suspected allergens – which can be near impossible when reactions can take twelve days to manifest – and going on a strict elimination diet (of the suspected allergens) so as to enable me to tolerate these foods better when they were reintroduced after eight to 12 weeks. Most of the time, I lived off lamb chops, carrots and mashed potato, because these have been found to be the least likely offenders. When your body is so overwhelmed and tired, this can provide some relief and increase energy, but it starves the body of the one thing that it needs and that’s nutrition.

Another typical approach is:

**Allergy Tests and Immunisation Vaccinations**

This is covered in SECTION 3 in more detail. While these only seem to have a fifty-fifty chance of working, these are worth pursuing, particularly if you are suffering greatly from allergy attacks. Immunisation involves building up tolerance to allergens through regular injections of minute amounts of the offending substances in a vaccine. This causes the level of antibodies in the blood to begin to increase after a couple of days, level off, and then decline. After a secondary exposure (called a booster shot), the level increases rapidly. If you are then exposed to an allergen, a rapid immune response occurs because your immune system already has large numbers of the correct killer cells.

**Anti-histamines**

These are another allergy aid. These block the receptor sites for histamine and can be quite effective. Natural anti-histamines such as Vitamin C are vital in place of using chemical/pharmaceutical versions, such as nasal aerosols and decongestants that can cause nasty side-effects and drowsiness. Two to four grams of Vitamin C per day will raise the level of the enzyme glutathione in your liver, a natural detoxifier. Vitamin C is not toxic at high doses: the only effect you will experience will be increased urination or possibly diarrhoea. If either occurs, simply cut back your daily amount.

**Gluten Intolerance**

This is the inability to absorb gluten, a protein found in wheat and can be tested for.

**Lactose Intolerance**

This occurs from the genetic lack of the enzyme lactase produced by the intestinal cells, resulting in the inability to break down products with lactose in them. If your ancestors were dairy farmers (introduced 10,000 years ago), you’ll have the enzyme; if not, you won’t. Symptoms, which often include watery stool, abdominal cramps and diarrhoea, are experienced after eating milk products. The symptoms of IBS are nearly identical to those of lactose intolerance, and the two syndromes can coexist. Treatment of lactose intolerance involves the complete elimination of all lactose-containing products from the diet. N.B. It is possible for non-dairy sources to contain small amounts of lactose e.g. baked foods, buttermilk, some breads, margarine,
biscuits/cookies, dry cereals, instant soups, malted milk, milk chocolate, non-fat milk solids, sweet or sour cream and whey. It can also be used as a filler in tablets and capsules.

I’ve mentioned synthetic chemicals and their presence in toiletries. For sufferers of eczema and other skin allergies, I’d suggest trying to switch all your chemical-based toiletries over to organic herbal products, so that the body can metabolise and excrete them.

Some detergents in shampoos (even baby shampoos) can break down the skin’s natural barrier, which can enable other antigens such as dust mites to penetrate. It is interesting to note as far as skin allergies are concerned that nowadays up to 20% of British children are affected by eczema at some point in their life. The figure used to be 5% in the 1950s. There is strong evidence that the huge increase in the use of products such as bubble baths, lotions, oils and talcum powder is responsible. If you suffer these types of allergies, replace all your products and buy organic ones. Beware of these as well, because not all of the ingredients are 100% certified organic.

As far as the home is concerned, it has already been established that dust can contain compounds such as dust mite faeces, and bacteria and moulds, which can trigger eczema and asthma. But, as discussed earlier, dust also contains chemical pollutants.

Immediate remedies to the dust/mite problem include:
• Use a damp sponge and dust regularly.
• Install an air filter (or use a stand-alone unit).
• Remove old carpeting. Cleaning carpets may help, but a contractor uses chemicals. You may be able to make up your own milder cleaning solution and hire a steamer.
• Buy an AEG (or similar) vacuum cleaner with filters that tackle dust mites.
• Replace your mattress and then regularly vacuum it and your bed linen.
• Use a plastic sheet to cover your mattress.
• Replace your pillows with synthetic allergy-free ones.
• Use mite-proof bed linen.
• Wash bed linen weekly at 60ºC. This kills the mites.

Incidentally, reducing the exposure of a baby to dust mites in his or her first year means he or she is less likely to develop allergies.

All of the above methods will help to ease the burden on your body immediately. Doing the detox will get to the root causes of your allergies and eliminate them because allergies are caused by severely damaged mucous membranes and a seriously disturbed internal environment (the extracellular fluids that surround cells) and this is caused by:

Chemical and Metal Toxicity
There is a direct relationship between frequency of exposure to mercury and frequency of allergic disorders. Heavy metals block the functions of the lymphocytes and macrophages (see SECTION 4) of the immune system. Chlorella, vitamins and trace minerals; selenium, zinc, manganese, Vitamins A, E and C, bind to and eliminate heavy metals. These supplements are included on the detox.

Over Acidic Environment
The acid/alkaline balance is altered through:
• Long-term chemical and metal toxicity
• Drug use – recreational and pharmaceutical
• Too much meat, grains, alcohol and sugar in the diet
Blood pH should be 7.3 to 7.35 (1 being acidic, 7 being neutral and 14 being alkaline). Acidity affects the body’s entire regulatory ability. Mast cells, which trigger allergic reactions when coming into contact with allergens, degranulate much more easily in an acidic environment and are more likely to generate histamines. Therefore, generating an alkaline environment by altering the diet is important. For a list of acid and alkaline forming foods, visit: http://www.crohns.net/Miva/education/acid_alkaline_foods.shtml

Defective Intestinal Flora
The intestinal flora comprise billions of bacteria that layer the inside of the intestinal tract. Intestinal mucous membrane damage and defective intestinal flora from toxicity, antibiotics and yeasts impair the intestinal mucous membrane’s absorptive abilities. This is where you’re obtaining all your nutrients through. Proteins that aren’t fully broken down are not absorbed properly. The villi then become less dense, and foreign proteins can penetrate the intestinal mucous membrane. These are detected by the immune system, which reacts accordingly. The majority of the human immune system is situated alongside the intestines. Damage to the intestinal flora places a tremendous overload on the immune system, which then often reacts ‘allergically’ to otherwise quite innocuous proteins. Allergies are, therefore, usually the result of problems with the intestinal mucous membrane. Restoring the intestinal flora and the intestinal mucous membrane is achieved by detoxing.

Fungi/Yeast
This subject is covered above under the Candida heading.

All of these above factors have a marked effect upon your immune system’s functioning and upon digestion and absorption. When you reduce your overall toxic load through the detox, the allergies you’ve had will either clear up or be significantly improved because once the internal environment is back in balance the immune system will not be on full alert all the time.

This is because the detox:
- Cleanses the lymphatic system as well as the liver and biliary tree, which play an important part in removing toxins.
- Modulates the immune inflammatory markers – cytokines.
- Stabilises the essential fatty acids held within cellular phospholipids (see SECTION 5).

Depression
Depression is thought to affect one in five people at some point in their life. There are approximately 20 million prescriptions/year for anti-depressants in the UK (population c. 60 million). It’s big business.

Definition
Depression can be defined by whether it is mild, moderate or severe and by whether it has physical symptoms or whether there are psychotic episodes such as delusions or hallucinations. For major depression to be diagnosed, five (or more) of the following symptoms have to be present during the same two-week period; at least one of the symptoms is either:
A depressed mood or a loss of interest or pleasure or a depressed mood for most of the day, nearly every day. And these remaining symptoms to make up the five (or more):
- Diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day
- Significant weight loss when not dieting or weight gain (e.g. more than 5% of body weight in a month), or decrease or increase in appetite nearly every day
- Insomnia or hypersomnia nearly every day
- Psychomotor agitation or retardation nearly every day
• Fatigue or loss of energy nearly every day
• Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick)
• Reduced ability to think/concentrate, or indecisiveness, nearly every day
• Recurrent thoughts of death/suicide without a specific plan, or a suicide attempt or a specific plan for committing suicide
• The symptoms cause clinically significant distress and/or the impairment in social/occupational/other areas of functioning
• The symptoms are not due to, a drug of abuse, a medication or a general medical condition (e.g. hypothyroidism)

Psychological Symptoms
• Continuous sadness, feelings of hopelessness and helplessness, low self-esteem, tearfulness
• Feelings of guilt, irritability and intolerance of others
• Poor motivation and poor interest/difficulty making decisions
• Suicidal thoughts/thoughts of harming someone else
• Anxiety/obsessional worries, acts, ruminations, or images and reduced sex drive

Physical Symptoms
• Slowed movement and or speech, change in appetite/weight (usually decreased but sometimes increased)/constipation
• Unexplained aches and pains and a lack of energy or interest in sex and menstrual disturbance

Social Symptoms
• Poor work performance
• Reduced social activities and contact with friends
• Reduced hobbies and interests
• Difficulties in home and family life

Treatments
1. Psychotherapies
Psychotherapy involves the verbal interaction between a trained professional and a patient with emotional or behavioural problems.

In 1986, scientists announced results of research into the effectiveness of short-term psychotherapy in treating depression. Their findings indicated that for some categories of patients and under certain circumstances, some types of cognitive/behavioural therapy and interpersonal therapy were as effective as medications for depressed patients. Medications relieved the symptoms more quickly, but patients with moderately severe depression who received psychotherapy instead of medicine had as much relief from symptoms after 16 weeks.

Psychoanalysis: any counselling that releases internal stresses from the past that have been buried in the subconscious and that cause depression later is helpful.

Cognitive Behavioural Therapy (CBT): involves various techniques of talk therapy and behavioural prescriptions to alleviate the negative thought patterns and beliefs that can cause depression. It’s very likely that you aren’t even aware of the negative automatic internal dialogue you are having with yourself. Start listening and stop criticising yourself.

2. Anti-depressants
Supposedly meant to help two thirds of the people that are prescribed, this figure may be overstated. Drug companies spend hundreds of millions of pounds to get a drug through all its clinical trials and to market.
Normally, new drugs are heralded as the latest and greatest panacea. The results of drug trials are more likely to be published if they are positive. However, there is good cause to believe that companies suppress publication of trials with negative data. (Just look at the fiasco over Glaxo and its drug Seroxat and teenage suicides.) Unfortunately, desperate patients will always mean high demand.

Physicians generally will prescribe one of four major types of medication used to treat depression:
- Heterocyclics,
- Selective serotonin reuptake inhibitors (SSRIs),
- Monoamine oxidase inhibitors (MAOIs)
- Lithium

If you do wish to take an anti-depressant, don’t become part of any new drug trials – you are simply putting your health at risk and literally becoming a paid human guinea pig, while the companies ‘fine tune’ their product. If you do take an anti-depressant, use an established drug.

In severe depression from ‘reactive events’ like bereavement, divorce, job loss, relocation and isolation which, of course, are difficult to deal with – anti-depressants may well offer a temporary lifeline. As you’ll see in a moment, all of the approaches that follow below help, but it is essential that you begin to understand the fact that your physical health has a tremendous effect upon your mental energy.

The effect of neurotoxins, stress, diet, mental discipline and exercise all have a marked effect upon how your mind copes with these life events. For those physically impaired by these factors or through hormonal changes or long-term depression, there may be changes in brain chemistry and lower levels of neurotransmitter functioning.

Neurotransmitters are message chemicals vital for brain cells (neurons) to be able to communicate with each other over the space between them. The gap between them is called a synapse. Serotonin is one of a hundred such neurotransmitters that ‘bridge’ the gap. As one cell transmits a neurotransmitter (imagine a key), another cell receives it via special proteins (receptors) (think of a keyhole). When the neurotransmitter floats around in the gap, some of it binds to the receptor on the other side. It has to be precise, because there are a lot of other ‘keys’ floating around in the brain’s fluids. Each key sends one type of message. Most cells can only ‘hear’ a few of these chemical messages because they only have a few receptor types on their surface. So one cell ‘talks’ by releasing bursts of neurotransmitter, but these need to be cleared fast out of the synapse so that the receiving cell can tell when it’s being spoken to and when it’s not. When the neurotransmitter binds to the receptor, the cell becomes more active, sending its own messages on to other cells. Sometimes, binding a neurotransmitter can decrease the activity of the receiving cell. It depends on the type of neurotransmitter.

Anti-depressants work because they:

1. Increase the number of neurotransmitters in the synapse.
2. Decrease the amount of neurotransmitter being cleared away – this leaves more of it floating around in the synapse, where it can bind to the receptors of the next cell.

Some anti-depressants block the enzyme that eats up the neurotransmitter, but most of the ones you’ll have heard of, such as Prozac, work differently: they block the recycling device. This increases the serotonin levels in the synapse (hence the term Selective Serotonin Reuptake Inhibitors)
Taking an anti-depressant can take weeks to take effect, but serotonin levels do get increased on day one, so simply increasing serotonin is not the way anti-depressants have their effects on mood; there must be something else going on that takes weeks to happen. That something else, which leads to a decrease in depression, is something that goes on inside the cells, the so-called ‘second messenger’ system, where other molecules inside the cell carry the message further (the neurotransmitter was the ‘first messenger’).

The decrease in receptor numbers on the outside of the cell is associated with an increase inside the cell of ‘cyclic AMP’ (cAMP). This is the first of many of these ‘second messengers’. Just what each one is or does is not as important as seeing what happens when they all work together to reach the nucleus of the cell.

What scientists have now recently discovered is a molecule known as Brain Derived Neurotrophic Factor (BDNF). Although there are probably other important molecules associated with depression, this molecule appears to be a probable ‘final common pathway’, enabling all anti-depressants to have an effect. BDNF is a molecule that ‘trophs’ neurons. The term ‘trophs’ comes from the Greek word ‘trophe’, nourishment.

A trophic factor is a molecule that somehow stimulates or enables neurons to feed, to grow and to flourish. Without such factors, neurons decrease in activity and decrease their connections to other cells. Both lithium and valproate, mood stabilisers used in bipolar disorder, increase another neurotrophic factor called bcl-2.

So, as you can see, the result of taking an anti-depressant or regular exercise or ECT is to increase BDNF. (ECT involves electrodes being placed on the head and a small amount of electricity applied.) When the cell nucleus makes more BDNF, it helps nourish the neuron. The neuron becomes more active and makes more connections to other cells. All of these methods increase BDNF (at least in rats, and most likely in humans, as supported by multiple threads of evidence, e.g. direct measures of BDNF in the bloodstream). See: http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=12842310

Tests on rats showed stress decreases BDNF. At present, we don’t know how stress causes this decrease. There is a lot of evidence to suggest that stress-related steroids – cortisol and its releasing hormone in the brain – are involved. Another study of rats showed that the typical Western diet, which is high in saturated fats and sugar (junk food is high in both these) actually lowered BDNF levels.

Like medications for any other illness, antidepressants can have side-effects. With tricyclic antidepressants, for instance, these may include dry mouth, blurred vision, drowsiness, lowered blood pressure and constipation, which tend to lessen as the body adjusts to the medication.

As a matter of note, there are studies by Dr David Healy, Director of the North Wales Department of Psychological Medicine, that have found one class of anti-depressant – SSRIs – to be more dangerous than the traditional older tricyclic anti-depressants (which in themselves were dangerous in overdose situations). SSRIs were linked with increased suicidal tendency and homicidal urges.

All the clinical trials data from around the world have shown these drugs to work but not as well as people have suggested they work and that they are being prescribed too freely. It was found that people are two and half times more likely to commit suicide than the control group of depressed patients who were given placebos. That equated to one in 500 people going on to commit suicide on these pills. For a drug that is prescribed to millions of people, that is a significant figure.
Often I’ve been surprised at the willingness of people to accept anti-depressants as a cure-all quick fix. By taking them, you may very well be masking the real root causes of your depression. I even have a friend, who naturally became depressed after he split up with his girlfriend in France and had to start life over back in England, who’d not paid any attention to the fact that he was also smoking too much cannabis and drinking, as if these weren’t having an effect upon his brain chemistry! He’s on anti-depressants now.

How to Tackle Depression
1. Detox – Happy Body, Happy Mind
I know from my own experience that your mental state is also completely dependent upon your physical state and its level of toxicity (chemicals, heavy metals, bacteria, viruses, and parasites). This is because your mental well-being is merely a symptom or expression of the physical body’s health. The organ that is responsible for clearing that toxicity and purifying the blood is the liver and to some extent the intestines. (See SECTION 4.)

The Chinese, for instance, believe that the seat of anger and depression is the liver. If you look up the word ‘liverish’ in the Oxford English Dictionary, you find the word ‘glum’.

Some of the greatest damage done to me during the illness was caused by my local doctors’ failure to recognise that my fatigue and depression had more than one cause. In their view, it was a ‘reactive’ depression due to an imbalance in brain chemistry, resulting either from internal chemical functioning or as a result of external social factors, and whose only remedy was synthetic chemicals designed to alter the brain’s chemical behaviour. After seeing a number of local GPs, I got the impression (after all their ‘tests’ had failed to identify anything physically wrong with me and despite the ‘leaden’ feeling I had throughout my body) that they thought my illness was ‘all in the mind’. This can be enough actually to cause someone to doubt even their own sanity! DON’T! No matter how ‘la la you may fell now!’

Don’t doubt you own instincts. If your symptoms feel physical in origin, then there’s a very good chance they are. This kind of reasoning by doctors had a profound effect upon my self-confidence: I was made to feel that I was somehow the cause of this condition myself. I became obsessed with attempting to find the ‘name’ of my illness, because I didn’t believe it was depression, and Post Viral Fatigue Syndrome is such a lame excuse for not doing anything. (‘Oh, he has depression, we can prescribe you an anti-depressant.’/ ‘Oh, he has a virus, there’s nothing we can do.’)

There are what seems obvious now, but wasn’t back then, small indicators as to the nature of whether your illness is the result of a depression or a physical problem. (When I did try anti-depressants, it confirmed to me that my inability to metabolise them reflected an issue that related to my liver and my body, not my mind.) These indicators showed me that my ‘depression’ would: Worsen during limited and specific times of the day, namely after eating. Some types of fatty food would leave me feeling particularly ‘down’.

Improve dramatically if I didn’t eat for five or six hours.

Worsen on days when I’d had alcohol the day before. (This was after a couple of years when I was stronger but still experiencing symptoms.) I would literally feel toxic.

The same would apply when I came into contact with perfumes, or paint fumes, but again this ‘depression’ would lift after consuming a lot of water.
Improve dramatically, if on a day when I felt particularly spaced-out and woolly head, I would consume two litres of bottled mineral water over a period of a few hours. I slowly realised that my problems were of a physical.

Being in such a poor physical state and spaced-out produced panic attacks. If you are experiencing panic attacks, there are some immediate things you can do to gain control:

- At the outset of an attack, to stop the ‘zoning in’ sensation: slap your hand on your lap/thigh, or clap your hands. This sudden loud sound helps the brain to refocus its attention. Very often, it’s the fear of having an attack that is overwhelming, and this fear can then be self-fulfilling.
- I would also recommend using the Bach Flower Rescue Remedy Tincture, as it is hugely effective in relieving anxiety.
- Read Anthony Robbins’s Unlimited Power: the chapter on ‘anchoring’ is particularly useful for putting yourself in a resourceful state of mind and to get you through the worst period.
- Stop using any recreational drugs and over-indulging in alcohol. These have both been linked to increased anxiety states once these narcotics leave the body. Excessive abuse of either will leave you feeling very wired when you stop.
- Take a multi B vitamin, as B1 deficiency can increase lactic acid in the blood, which, if not picked up immediately by the liver, can cause symptoms that mimic a panic/anxiety attack and a heart attack combined.

The creators of the detox designed it to deal specifically with toxins, particularly those that act as neurotoxins. Its success lies in its ability to repair the cell membrane (there are trillions of cells in your body) by reducing the production of bad fatty acids that affect the cell membrane. This improves the cell’s health, its cellular energy and its ability to absorb nutrients and remove waste from within. Cell membrane health is vital for mental and physical health. Nourishment of the cell membrane is crucial. It allows nourishment of the cell neuron. (See SECTION 5.)

**Warning:** If you are taking anti-depressants and you feel they are helping you, *don’t stop taking them* if you wish to do the detox. When you do stop taking them, you should not suddenly come off them but gradually reduce the dose. Please seek medical advice.

### 2. Exercise

Exercise has an effect on brain chemistry. See Oliff’s work on BDNF at:  

Also exercise been shown to increase BDNF in the rat hippocampus (the area in the brain controlling the autonomic nervous system), which means that all the neurons are communicating with each other. See research at:  
[http://www.psyceducation.org/start/references_frames.html#Oliff](http://www.psyceducation.org/start/references_frames.html#Oliff)

It even seems to increase the *number of cells* in the hippocampus, at least in rats, and at least with a lot of exercise. Notice in this summary from *Neuroscience* how their mice increase brain cells by doing the opposite of watching TV: learning, social activity, and physical activity.

There has been no way of measuring BDNF in *our* hippocampus – yet. Well, now that you know all these facts about exercise, you’re going to head out for a walk, right?

To some extent our health, mental and physical, is also determined by our genes. To some degree we are pre-genetically determined as to how we respond physically to illness. (You can also have a genetic pre-disposition to depression or to alcoholism.)
Dr Hugh Montgomery, an eminent British Cardiovascular physician, has isolated a couple of genes that determine our ability to produce oxygen. The presence or lack of these genes determines why, in two similar patients, one patient dies while on a ventilator, while the other pulls through. The point of telling you this is that due to his own experience and research with mountain climbing, he too has realised that exercise can have a more beneficial effect upon depression than any anti-depressant. The message is clear: those twenty minutes that you can take walking briskly every day in fresh air will influence your mental health. In fact, any exercise that produces an increased heart rate for 20 minutes will make a difference. And I recommend gentle exercise here as opposed to three-mile hikes especially if you are feeling particularly weak, as this just places greater stress upon your adrenal glands. (No you don’t need to run six hours a day to get the benefit!)

3. Eliminate High Sugar/Saturated Fats in Diet
It’s important to consume polyunsaturated fats (PUFAs). Our brain’s evolution during the last two million years was based on a high intake of long-chain omega-3 fatty acids, which provided the necessary membrane fluidity and development of receptor-neurotransmitter functions. However, the omega-6: omega-3 ratio in the modern diet has risen from 1:1 to 25:1, caused by the consumption of meat from intensively-reared animals fed grains rich in omega-6 PUFAs rather than wild plants with a high omega-3 content and also from a high intake of vegetable oils.

Saturated fats are those that are found in whole-dairy products, animal meats, many commercial vegetable oils and in junk foods such as cakes and biscuits. The highest levels are found in red meats. White meat poultry and fish are fine because they are lower in saturated fats. Your body also produces them. Excess carbohydrate intake, as refined sugar and white flour, are converted into fat by the liver and stored.

It is the very long-chain saturated fatty acids that are the ones that cause problems with cell membrane function, so all high temperature processed vegetable oils and saturated fats derived from junk foods are eliminated in the detox diet.

The bi-lipid cell walls of all your cells in your body should be fluid in composition. When they’re made up of rigid saturated fats – cholesterol is structurally similar – you get a decline in fluidity and lower metabolic performance.

Put simply, unhealthy cells equal unhealthy body. The loss of those dynamic double bonds of the high-energy lipids of the cell membrane is now thought to be the major cause of the ageing disease. The best fats are monounsaturated fats. You can get these fats from olives, olive oil, canola oil, macadamia nuts, almonds, pecans, cashews, guacamole and avocados: it’s basically your Mediterranean diet. More detail on fats can be found in SECTIONS 4 and 5. Carbohydrates and their effect upon insulin levels and hormones are discussed in SECTION 5.

If you are in any doubt that a diet high in saturated fat and sugar has a significant effect upon mood, visit: http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=12088740

4. Change Mental Thought Patterns
“There is nothing good nor bad but thinking makes it so.” In a lot of ways this quotation from Shakespeare is a very precise observation. Anthony Robbins, in his book Unlimited Power, also realised that people could benefit from a form of mental discipline, called Neuro Linguistic Programming (NLP), that would enable them to control the way they thought about present and past events. This technique helped to get me through some of my darkest days at the beginning of my illness. Years later,
when I had got a lot of my energy back (although I still had more bad days than good), I used the technique to fulfil a lifelong dream and play guitar live in a band.

The technique is in some ways similar to CBT and simply involves acting like a movie director in your head and altering the auditory, kinaesthetic (touch/feel) and visual way you communicate the outside world to yourself. Through a series of only five or six different sensory messages to yourself, you effectively determine your experience of the outside world.

Everyone has different means of internal communication with themselves. I am extremely kinaesthetic and auditory. That means the way I talk to myself in my head – soft, loud, fast, slow, what the tone of my voice is like – all of these things have a massive impact on how I feel and how I experience events in the outside world. For example, I realised the way I had been representing the idea of ‘playing live’ to myself auditorially, kinaesthetically and visually wasn’t that different from feeling as if I were a prisoner standing in front of a firing squad! Not very motivating, as you can imagine. This messaging system that can help you feel positive about things can also easily produce a phobic reaction to something. For example, if you have a fear of spiders, the internal messaging will go something like this – and remember you do this in a fraction of a second. Visual recognition! Then auditory: ‘It’s a spider!’ You’ll see the image of it in your mind’s eye a lot larger than it is: this produces a feeling of dread (kinaesthetic response)! IT’S GETTING CLOSER! (auditory) – the panic in your internal voice will produce a greater feeling of fear! (kinaesthetic). Then you picture it being on your skin (visual). This produces an auditory response now said faster and louder – Aghhh! MOVE! You can see how easy it is to create a phobia. Anthony Robbins has cured fears and phobias in minutes that clinical psychologists have taken years trying to address.

I strongly recommend you get the book for inspiration and take what you can from it, because once you understand that there are ways that you can alter your communication with yourself and get yourself into more powerful positive states – like the movie director who decides how he wants to picture something – you’ll be surprised by the changes you can make to your mood, attitude and beliefs.

5. Avoid Smoking, Illegal Drugs and Alcohol
This is easier said than done. The younger you are, probably the more difficult it is to appreciate this. The effects of these substances, particularly smoking, are much more damaging when the body is already struggling to remove toxins such as chemicals, heavy metals, candida, parasites or bacterial imbalance. These drugs simply overwork an already overburdened liver.

Having said that I understand the self-defeating, self-medication route. It is a common path for many when faced with health challenges that conventional approaches fail to address. I receive emails from people that have chosen such a route. I have also experienced this trap myself. These substances can provide a mask and hide symptoms like the spacy head sensations that accompany high states of toxicity. It is my belief that high pathogen activity leads to large amounts of toxins being released into the blood by these organisms (like candida yeast) and that the body can not clear these toxins fast enough.

By taking these substances – and I’m referring to more than the occasional glass of wine – you are compromising your chances of recovery. Effectively, you are running to stand still, particularly if you’re drinking and have a yeast problem. You can drink in the future but, for now, accept that you are stopping, because all of these indulgences unfortunately have:

• A dramatic impact on your insulin levels (see SECTION 5).
• An increase in the nutritional demands upon your body and a decrease in your already limited nutritional absorptive ability.
• They act as both toxins and neurotoxins, lowering your mood over the long term, your motivational ability, and, above all, they eat up time, something we all need to cherish.

Drug effects upon the body are examined in SECTION 4.

6. Relaxation
It is said that stress is a killer, and there may be something in that. Increased stress levels, particularly long-term stress, have a major physiological impact upon the body. These range from increased heart rate, increased levels of adrenalin and cortisol – the wrong types of hormones to have continually surging through the body – to generally increased nutritional demands.

Adrenalin not only raises insulin levels (see SECTION 5) but also reduces the activity of the enzyme that makes gamma linolenic acid (GLA). GLA is an omega-6 fatty acid, one of the eight essential fatty acids (EFA) that are either classed as omega-3 or omega-6 fatty acids.

These fats are essential to the production of eicosanoids, the superhormones that are produced in every living cell and which control the body’s hormonal system, regulate the CNS, the immune system, the cardiovascular system, the reproductive system, etc. For some strange reason, fats have had a bad rap. Health practitioners have been telling the public to eat high-carbohydrate, low-fat diets, and the results are clear for everyone to see: obesity is now at epidemic levels. By the way, it’s not fats that make you fat (see SECTION 5). Omega-3s and omega-6s are vital for optimal health, unlike the rubbish saturated fats found in a lot of junk foods, such as burgers, pastries or cakes.

Try to use relaxation techniques: even reading is a form of relaxation. Meditation and yoga are also perfect for reducing stress, as is exercise or massage.

7. Set Goals
Nature abhors a vacuum. That space needs to be filled, but deep depression can make it very hard to focus beyond the next couple of hours. Make a conscious effort to set small attainable goals and aim to achieve them. It doesn’t matter whether it’s going for a walk or reading a chapter in a book. Tell yourself that you are going to beat this and you will beat this – hard as that is to believe now.

Even the simplest of goals can help to set your mind forward to reaching something, instead of allowing it to focus negatively on the past or present. Watch that internal dialogue and challenge it. These beliefs you’ve picked up about yourself have been given to you by your peers, parents or teachers, and sadly, very often, we buy into them because they feel safe and familiar. You should not be criticising yourself; after all, you learnt the majority of these beliefs when you were a child. It’s not fair to criticise a child who doesn’t know any better.

Internal beliefs that you have about yourself can also be changed in a split second if you choose to replace them with more supportive ones. After all, those beliefs have got you to where you are right now. So they’re not serving you well, are they? Right? Get rid of them. Find something that you’re interested in and focus on it. This could be in your personal life, professional life, a personal target. A dream, no matter how small, is essential for hope. With hope, you have a future.

Lipomas
Lipomas are benign (non-cancerous) soft fatty tumours composed of mature fat cells that form just beneath the skin. Almost two-thirds of them display clonal alterations. They can occur on most parts of the body apart from the face, scalp, palms and soles.
(where there is little fatty tissue). There is a line of thought that they may be caused after having sustained a physical blow to the area affected.

The most common sites are the shoulders, the chest and the back, but they can appear anywhere there is fatty tissue. They vary in size from 2-10 centimetres in diameter. Some people have a tendency to develop lipomas and may have several on different parts of the body. However, it is more common to only have one or two.

For some unknown reason, the Western medical profession has regarded the formation of these lipomas as acceptable, until they reach a size where they are considered either unsightly or a nuisance. The only option I was given by the skin specialist I consulted at a major London Hospital was to have them surgically removed (I had one lump around 3cm x 2cm on my hip and a larger lump 12cm x 7cm below my left rib cage on the back of my lower torso). I have read of people having a considerably far greater number of these lipomas.

If you think of all the warnings about fatty fish such as salmon and tuna having higher levels of toxins present compared to less fatty fish such as cod or haddock, this is because the toxins also accumulate in the fatty tissue. Cod and haddock don’t accumulate the same level of toxins.

As we’ve learnt, metals toxins are fat-soluble. Because of this, they tend to bind to structures that are rich in fat. Metals are able to be transported in the blood and stored in the fat cells within the organs – typically the liver, gall-bladder, GI tract, brain, and the adipose (fatty) tissue of the body. This last storage site means that these fatty lumps can appear within the tissue (under the skin). Once the body is given a chance to detox heavy metals such as mercury, cadmium and lead, these lumps naturally dissolve.

We’ve already seen the way traditional Western medicine regards the conditions I’ve described above when compared to ‘alternative’ health experts, but it’s still worth highlighting how these two approaches to health care differ so much from each other.
SECTION 3: CONVENTIONAL versus COMPLEMENTARY MEDICINE

The Medical Industry

My own experiences with GPs and Consultants has not been particularly useful. While I believe that it is essential for anyone to visit their doctor if they do have health problems, it's important to understand that unless you can be found to have what is already a well-documented and readily identifiable illness (and one that fits a recognised pattern), then the best they can do is arrange appointments with Specialist Consultants in an attempt to confirm their hunches. For me, this resulted in having blood tests, seeing allergy specialists, gastro-enterologists, a visit to the Centre for Tropical Diseases, psychologists etc... Environmental Illness is not on the map... yet.

This highlights one of the main problems with this approach to healthcare: it doesn’t treat the body as a whole. It only identifies areas of expertise and treats specifically. So, if you have allergies, you see an allergy specialist; if you have stomach pains, you see a gastro-enterologist. If you have colon cancer (where genes that control the orderly replication of cells are damaged and cell growth is uncontrollable), they radiate and/or cut out the affected area. This, of course, depends on how far the disease has progressed and may be the only approach available, so I don’t wish to criticise the level of dedication and expertise of the consultants and surgeons.

The point I’m making, however, is that it would make more sense if we were to address the potential causes behind such a disease before it ever gets to that stage. This would be a more cost-effective and sensible approach to healthcare. The basis for Western medicine mainly appears to be aimed at the identification and suppression of symptoms. Symptoms appear, and the body can be said to be in a state of disease, because there is an underlying root cause producing undesirable symptoms.

We live in a culture where we expect instant results. If we have an illness, we expect a pill that will cure us. Drug companies have even come up with newly-defined illnesses/disorders so as to be able to identify, label and target new potential consumers: I believe the next wonder drug is the female equivalent to Viagra.

In the UK, according to a report, each year 20,000 people die from prescription drugs and some 415,000 people suffer side-effects that leave them disabled.* In the US, the figures are even more astounding: over 106,000 people die and a further 2.2 million suffer serious side-effects.**


After 12 years avoiding anti-depressants, I tried amitriptyline at the suggestion of a consultant from the Royal Free Hospital in London, who felt the y would alleviate the brain fog/spaced-out feelings I’d had since 1989. I became more ‘upbeat’, but I also suffered partial loss of vision in my left eye, and my skin had a slight hint of green discoloration around my mouth and cheeks (a liver/ gall-bladder problem), which was ignored and dismissed by the consultant as having ‘been caused by my own anxiety’.

Alphapharma, the drug company responsible for this drug, sent me data on ‘rare’ adverse side-effects, and there was a list of reported cases of reactions to a range of anti-depressants. If you’re unfortunate and suffer a rare reaction, the possible consequences include: jaundice, fever, cholestasis of the hepatic venule, portal track lesions, fibrosis, the disappearance of interlobular bile ducts, hepatitis, and death (in two cases).
N.B. The company states for one patient: “It is quite possible that this patient’s liver function abnormalities are due to amitriptyline; however, a definite causal relationship can’t be determined from the history.” Further in the literature (referring to psychotropic drugs in general), it also notes symptoms “usually resolve after the discontinuation of the implicated drug.”

I believe it’s possible that if I’d continued taking the drug I would’ve become another ‘adverse side-effect’ statistic. They may be a life saver for some, but this drug obviously can pose a serious problem for people who can’t metabolise it properly. It seems the ability of the liver to metabolise any substance depends upon its own health and the current level of toxic burden.

Complementary Therapies
The types of alternative therapies that were of the greatest benefit to me before discovering the detox procedure that cured me includes: Vitamin Therapy; Chinese Herbs and Parasite Cleanses.

Vitamin Therapy
Just as you come across not very effective doctors in traditional medicine, the same applies to alternative medicine. I would try to find practitioners that have either come recommended or are a member of a professional body. In the US, you can find a nutrition professional by going to the American Dietetic Association website: http://www.eatright.org/Public/

In the UK, you can go to the Complementary Medical Association website: http://www.the-cma.org.uk/ (To find local practitioners enter postal code as capitals with spacing e.g. NW1 8UR.)

If you can’t find a practitioner familiar with this system of detoxing, it is possible for any qualified practitioner to purchase the Detoxx™ Book, which is a doctors’ guide available from BodyBio, the American company that formulated this program. It costs about £20 or $32.

It is essential that you don’t take vitamins without first having a vitamin profile to determine which vitamins and minerals you are deficient in. Vitamins can have drug-like effects. The recommended daily allowances are covered in SECTIONS 4 and 5.

At the beginning of my illness, I had the lowest vitamin B6 deficiency one West London laboratory had ever seen. ‘Coincidentally’, I was also the most depressed I’d ever been! B vitamins are essential for mental well-being – and immune system support.

At this time (1990), traditional local GPs had very little time for this type of therapy believing “you can get everything you need from a balanced diet”. Fortunately, opinion has shifted. The factors that have led to this situation and the need for vitamin and mineral supplementation are examined in SECTIONS 4 and 5 of this book. The consequences for someone with any kind of health concern make the inclusion of a program of vitamin supplementation not just a consideration but a must.

Chinese Herbs
Another form of complimentary medicine I turned to was Chinese herbs. Chinese medicine as a form of health care dates back many thousands of years and it’s one that also relies on natural herbs.

The Chinese system of healthcare is based upon the belief that there are energy pathways within the body and that these channels can become blocked, physically or emotionally. When one energy system is impaired, it places greater burden upon the other systems, which can then also experience imbalances.
In 2001, my Harley Street doctor was very keen for me to see a Chinese Herbalist she knew who had amazing results. I had already begun a process of detoxification using vitamins and minerals with her, but every time I was retested, the results were the same – the presence of metals.

I kept an open mind despite previous failures at treating my illness. Again, the Chinese doctor noted my low liver energy along with gall-bladder and spleen energy impairment. One of the symptoms of my ill health, which by this stage was ‘normal’ for me, was the production of vast quantities of phlegm, which I would swallow every minute or so (remember this mucus production is the immune system’s response to clear toxins). To my relief, the Chinese herbs greatly reduced this problem, although the spaced-out feelings and digestion problems still remained.

My logic for using Chinese medicine was that, because it was natural, it would cure. Unfortunately, metal and chemical toxicity is a symptom of industrialisation over the last couple of hundred years and it wasn’t effective in ridding my body of these modern-day toxins.

Parasite Cleanses
I undertook a three-week parasite cleanse with cloves, wormwood capsules and black walnut tincture. This made the most difference to my health and energy over any other therapy during my 15-year illness. The parasite cleanse was amazing, because all the sugar/food cravings I’d had for years simply vanished **overnight**. The only adverse effect was a two-day ‘healing crisis’: as the parasites are killed off, they release toxins into the blood, which can produce unpleasant symptoms. **This also occurs with a yeast die off.**

If you crave a particular food, it can sometimes indicate an intolerance to it. For example, at times I’d drink/crave up to three pints of milk a day. The parasite cleanse practitioner informed me that I was lactose (milk) intolerant and interestingly, when I came off milk, I actually experienced a couple of days of flu-like symptoms. Luckily, there are many alternatives to milk: rice milk, goats’ milk and soya milk. Our consumption of milk is unnatural when you consider that we are the only mammals that continue to drink milk after we have been weaned.

Following this, the practitioner insisted that wheat was now the only reason for my remaining symptoms (spaced-out head, stomach pain, still with periodic lethargy). I was sceptical. Although allergies can have severe effects, instinctually I knew this wasn’t the root cause for my health problems and I continued to look for an answer. (I tried a wheat-free diet without result some time later.)

The Truth Behind those Medical Tests
I believe that the level and specialisation of testing has come a long way in the last 15 to 20 years, but there are still a few factors worth pointing out:

1. **Tests are not always conclusive.** The accuracy of tests can be hit or miss. Even a simple case of food poisoning (from a supermarket meat counter) has initially produced negative tests results for me. In this case, dissatisfied, my local GP requested a retest. This time the results were positive for the bacterium Campylobacter.

This is a **very common** culprit in food poisoning cases. Was there a possible oversight on the part of the technician? Did they fail to include the test for Campylobacter, unlikely but possible? There are many scenarios for negative test results including varying times for culture growth and poor quality control within laboratories. Split specimen testing ensures quality control and involves one sample being sent to the laboratory twice. Results should be the same to within 10% of each other. The York
Nutritional Lab routinely tests using split specimen testing. Their websites can be found at:
http://www.allergy.co.uk/ (click on laboratory tests) and
http://www.yorkallergyusa.com/

(I shall attempt to continue to include testing facilities that either have this level of quality control or have been personally used by me and/or come highly recommended by nutritional experts familiar with the form of detoxification described in this eBook.)

If you have had a negative test result, it is possible that a potentially causal factor may be eliminated from the search. Metal toxicity is particularly difficult to identify, and this is in part due to the nature in which the body handles metal toxins. (See below and SECTION 2 on the Effects of Chemicals and Metals.)

2. Tests can be expensive and take on an over-importance of their own. An English herbalist I knew told me of someone he was treating that had spent £25,000 (US $43,000) just on tests – and still not found anything wrong. It is easy to become obsessed with having more and more tests and become more anxious each time the results are negative. Again, this can undermine confidence in your belief in a physical rather than mental origin to your illness.

3. There are literally thousands of tests of different types: blood, urine, hair, skin, sweat, all with conflicting opinion as to their effectiveness. So, I suggest the first thing to do is to have tests carried out through a GP or at a hospital. These tests, although not specific, pick up any general and more obvious problems. Tests include Immunoglobin IgA, IgG, IgM, IgE, antibody responses. The last two tests test for general classes of micro-organisms and antibody responses to things such as pollen, dust or foods, respectively. Tests can also be carried out to determine blood glucose levels, cholesterol levels, thyroid function, and I would suggest having stool tests for Campylobacter, Helicobacter pylori, Salmonella, Shingella and E. coli. Be aware that stool tests can be unreliable. They also tend to be inaccurate in showing the presence of candida. See below.

General liver functioning tests may also be carried out. Again, bear in mind that the liver carries out over 10,000 functions.

Please also realise that it is practically possible to test positively for any number of chemicals. When levels are above the norm, the issue is in assessing what adverse impact they’re having upon your health. Two people exposed to the same level of pesticides and mercury can produce very different symptoms, one person having neurological problems because of the mercury and the other having pesticide related problems.

**Testing for Allergies**

A number of points need to be made first:

If you are testing for food allergies, remember it’s your body’s reaction to the food not the food that is to blame.

- If you have dozens and dozens of ‘offenders’, this is the body’s way of informing you that you need to get the internal environment of the GI tract free of possible problems that are causing inflammation/irritation: bacterial imbalance, parasites, leaky gut syndrome, and metal and chemical toxicity.
- Cure these problems, and the number of ‘offending’ substances will completely disappear/decline considerably.
- Allergy tests are not always accurate. If you haven’t eaten a possible offending food (allergen) for a long time, you may not have antibodies to it in the blood.
• You may get a false negative RAST result (see below). This is because tests to allergen ‘mixes’ may be less sensitive than Radio-AllergoSorbent Testing (RAST) tests to ‘single’ allergens, (e.g. a Food Mix versus just peanut) and skin tests.

**Blood Test**
A blood test called RAST occurs where a sample of your blood is taken to measure (and grade between 0-6) the number of specific Immunoglobulin E antibodies (IgE) you have to various environmental and food allergens.

Over 400 different allergens can be tested for. There is also a Respiratory allergy screening test and a Food Allergy screening test, which identifies allergy to Milk, Egg, Wheat, Fish, Soya and Peanut. The Nut Screen can identify allergy to Almond, Brazil nut, Hazelnut, Peanut and Coconut. The Seafood screen can detect allergy to various Fish, Shrimp and Black Mussels.

IgE levels are often higher in people who have allergies or asthma. RAST may be used for people who can’t have skin tests, such as people who are taking certain medications (particularly some anti-depressants) that can suppress skin test results.

**Skin Tests**
Skin prick tests involve placing a drop of a solution containing a possible allergen on the skin. Then the skin is punctured under the drop with a needle to introduce the allergen solution into the top layer of the skin. If the skin reacts to the allergen with a red, raised itchy area (called a wheal), it usually means that the person is allergic to that allergen. This is called a positive reaction.

An intradermal allergy test may be done when a substance does not cause a reaction in the skin prick test but is still suspected as an allergen for that person. In this test, a small amount of the allergen solution is injected deeper into the skin. Results usually are more consistent.

A positive result only means that the person has antibodies to that allergen; it doesn’t necessarily mean that the allergen causes a serious problem for the person. (For example, many people who test positive to insect venom don’t have an allergic reaction to insect stings.)

Skin patch tests are used to detect a skin allergy called contact dermatitis. For a skin patch test, the allergen solution is placed on a pad that is then kept in contact with the skin for up to two days. Common substances tested include:

- Trees
- Shrubs
- Weeds and grasses
- Fungus
- House dust
- Feathers
- Dust mites
- Pet dander
- Foods
- Medications (such as penicillin)
- Insect venom

Other allergy tests can be done for lactose intolerance, which show whether or not you have the enzyme to break down lactose in milk. Gluten intolerance tests show if you produce anti-bodies to a particular protein found in the wheat. It has been suggested by some practitioners I have seen that wheat allergies may occur due to allergies to the pesticides used on the wheat and not to the wheat itself. I can’t comment on whether hospitals use organic wheat.
Testing for Chemical Sensitivity
According to the American Academy of Allergy and Immunology, there is no clinical evidence that the condition even exists! Anyone who suffers from this condition knows this to be incorrect. Consequently, going to your doctor may be a waste of time. Fortunately, most reputable labs will be able to do chemical screening to establish particular intolerances. Personally, I would detox first. You will find your intolerance to the usual suspects will either go or be reduced.

Testing for Parasites
If you suspect parasites might be at the root of your problem, tests can be carried out at the Hospital for Tropical Diseases in London with a doctor’s referral. See SECTION 2 on Parasites and Bacteria. Their website is: http://www.thehtd.org/Parasitology.aspx
Similar institutions exist in other countries.

N.B. When parasitic worm infections become chronic, as they eventually can do for many people living in tropical areas, the infections can be quite low key – as they depend upon a mutual tolerance – and a manageable laissez-faire between guest and host may exist.

Sometimes with parasite tests you don’t necessarily get a significant reaction. As one parasite expert put it: "If a worm succeeds in getting inside you, if it gets past your initial immune defence, you want to be at peace with your parasite. You don’t want your whole body swelling up all the time (an immune response action). There must be something that has evolved naturally to control the severity of the response.” The implication is that the only evidence might be in your stool, in the form of ova, cysts or actual parasites.

Testing for Candida
Candida testing was virtually non-existent 15 to 20 years ago, partly because antibodies to candida can be found in over 90% of the population. It also wasn’t considered to be a factor in fatigue. Because it naturally occurs in the bowel, stool tests are not reliable in determining the presence of candida.

Research evidence that blood tests (IgG, IgM and IgA) can also show antibody response to systemic candida can be found at: http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=PubMed&cmd=Retrieve&list_uids=7898517&dopt=Abstract

The Individual WellBeing Diagnostic Laboratories in London also carry out candida testing using blood and saliva. Their website can be found at: http://www.iwdl.net/Candida.htm

If candida has become pathogenic, i.e. disease causing, it elicits an immune response leading to the production of elevated levels of specific antibodies to candida. They use a very sensitive ELISA (Enzyme Linked Immuno-Sorbant Assay) technique, which measures levels of both IgA and IgG class antibodies to candida albicans. These antibody levels can be used to diagnose not only a recent or current candida infection but also indicate previous infections.

Urine sample tests can also be used to look for the presence of metabolites – these are substances that are released by the chemical activity of yeasts.
Testing for Heavy Metals

Dentist Mercury Sensitivity Tests
There is a lot of controversy over the possible harmful effects of dental amalgams that use metals such as mercury (Hg), gold (Ag) and silver (Au). Mercury normally comprises 50% of amalgam fillings, and mercury vapour (methyl mercury) is given off during chewing and brushing.

My own experience with mercury filling removal was that, apart from feeling tired immediately afterwards, due to the effects of the anaesthetic, I noticed no change in my symptoms after having them removed. (N.B. I don’t recommend that you have them all out in one sitting due to the potential high toxic exposure.)

However, years of gradual mercury erosion and evaporation may result in levels of mercury being identified in the blood. Mercury that escapes from dental amalgam fillings is converted by oral and intestinal bacteria to methyl mercury, which is then bound firmly to proteins and other molecules. Methyl mercury is far more toxic than mercury and can cross the blood brain barrier and the placental barrier, leading to massive prenatal exposure. Earlier studies determined that over 90% of the common body burden of mercury is from dental fillings, and recent studies show that eating fish is now starting to compete with amalgam fillings for the leading position as a risk factor.

My mercury blood test in 1990 by Biolab in London produced a reading of three parts per million. I was told that this is apparently a ‘safe’ level, 10 parts and over per million being significant. I was informed that mercury was not the cause of my health problems. Biolab carry out a full range of tests. Their website is: http://www.biolab.co.uk/

Unfortunately when testing for metals, the concentrations of metal toxicity in the blood do not always reflect the true extent of your total body burden or exposure, particularly in long-term chronic low-level exposure. This is because the body is highly adept at ‘containing’ the exposure to heavy metals where the body is unable to eliminate them. (This might be due to a number of reasons and is covered in SECTION 4.)

Because heavy metals are fat-soluble, they tend to bind to structures that are rich in fat. They are able to be transported in the blood and then stored in the fat cells within the organs, typically the liver, gall-bladder, GI tract, brain, and the adipose (fatty) tissue of the body – as a defence mechanism.

My next metal test, unfortunately, wasn’t carried out until 10 years later, when a hair mineral test produced a lead (Pb) reading that was quite literally off the chart (over the 10 parts per million range and also with mercury present). Ironically, the hair test was actually taken to determine my present vitamin status not heavy metal burden.

So the issue really is at what point do you incur toxicity? For me, the answer is that it doesn’t matter. Any test result that shows the presence of heavy metals should be used as an indication that you should undergo a detox if you are suffering greatly from a range of symptoms.

If you have signs of mercury leakage and/or sensitivity, I would recommend that you simply remove them. You may have no allergic reaction to them at present, but I regard them as a time bomb. That also applies to gold and silver amalgams, crowns and fillings.
There are dentists that specialise in mercury filling removal or you can use a conventional dentist. Ask if they use a dental dam, as this will help prevent mercury from being ingested during the removal process.

Evidence of the potential hazards of mercury fillings can be found at: http://www.quecksilber.net/

A company called The Melisa Medical Foundation (London) has developed the MELISA® (MEmory Lymphocyte Immuno Stimulation Assay) allergy test for metals that is regarded as the only scientifically proven test of its kind. This claim is backed up by published scientific papers available on their website. The site contains articles and abstracts (summaries) on metal allergy and toxicity.

The test measures the reactivity of white blood cells to a series of metals and other compounds. The idea is, according to their website, “that the immune system has a memory and any previous encounter with foreign, or 'non-self' substances will be remembered by the immune system’s memory cells... Memory cells are white blood cells that circulate in the blood. When they encounter antigens they remember and rapidly try to destroy what they see as a foreign invader. This, the attempt to destroy, is also the reaction which signals an allergy.”

They go on to say: “Patients with a metal allergy will have, in any blood sample, memory cells formed by original exposure to the offending metal. These memory cells will also grow outside the body in a tissue culture plate. An immunologic reaction is demonstrated when the lymphocytes start to grow into lymphoblast.

MELISA® also tests for other compounds such as thimerisol, a mercury-based preservative used in vaccines, in addition to other suspect antigens.” There are labs in Europe and one in the US that carry out the MELISA® test. More details can be found under Contacts on their website: http://www.melisa.org/

Without the detection of an allergy to metals, it must be understood that this does not indicate that other systems, excluding the immune system, are not being impacted. The effects of heavy metals have been established, not least of all on the hormonal system.

**Urine Tests**

Urine challenge tests generally involve measuring metal content, then administering an oral or IV mobilising agent and re-measuring the metal content in the urine after a few hours. Best known is the DMPS challenge test. However, there is agreement amongst most researchers, that the urine mercury content does not reflect total body burden, only the currently mobilised portion of mercury in the endothelium and kidneys. If there is no reading, there can still be detrimental but non-responsive amounts of mercury in the CNS, connective tissue and in other sites in the body.

**Hair Mineral Analysis**

This type of profile can establish vitamin and mineral tissue status. This can be used to determine the degree to which minerals may be associated with a stimulating and/or inhibiting effect upon the endocrine glands (thyroid, adrenal and pituitary) which, in turn, regulate nutrient absorption, excretion, and metabolic utilisation.

It is possible to establish the metabolic profile of an individual and if there is a tendency towards decreased thyroid or adrenal functioning. Factors that contribute to slow metabolic rates include poor endocrine functioning (hormonal); diet, particularly a low protein, high carbohydrate diet; digestion, or more specifically the lack of proper
utilisation and absorption of nutrients. This results in decreased energy production on a cellular level which then affects metabolism which then, in turn, impacts digestion, creating a vicious circle; and lastly viral infections.

Symptoms associated with a long-term slow metabolism are: fatigue, cold hands and feet, easy weight gain and craving for sweets. Slow metabolisers are also prone to hypoglycaemia (low blood sugar, covered in SECTION 5).

Hair analysis, as briefly mentioned above, also includes the level of toxic metals and toxic metal ratios, which show the balance of protective nutrient minerals to toxic metal (see SECTION 4 for more detail). For hair analysis I would recommend a company called Mineral Check based in Kent, UK: http://www.mineralcheck.com

They have been helpful to me in the past and their reports are very detailed, giving dietary suggestions on foods that, for example, affect thyroid activity and slow metabolism and they also give vitamin recommendations.

It should be pointed out that hair analysis shows your current status over the last one to two months, so it can reflect acute toxicity or recently mobilised metals but perhaps not your overall heavy metal burden. Also, you can check to see how you are responding to the vitamin therapy, which you can’t do with a blood test.

However, had I not been using very strong cleansing herbs at the time, I don’t know if the high level of lead would have even been present in my hair on the first test.

It has also been suggested that the test is better at picking up aluminium and lead. Mercury poisoning can’t be detected as well because mercury accumulates in the connective tissue (fatty tissue) and nerves and reaches the skin (and hair) only to a very slight degree.

You can only go with what the test results show. So, although the tests might show no toxic metals but indicate the need for a nutrient supplement program, it is only as the body starts to rebalance with the aid of nutrients that metals can then be released and excreted, producing a positive result.

I believe this is the reason why autistic children with perceived neurotoxin exposure have no trace of mercury when they’ve had hair tests yet have responded well to metal (mercury) detoxification programs. I have heard of autistic children making remarkable progress from the practitioner I saw who had attended a lecture of Patricia Kane in the US. (Patricia Kane, PhD, along with John Foster MD, and Neal Speight MD, developed this particular detox procedure in the US and named the company BodyBio).

**Visual Contrast Sensitivity Test (VCST)**

BodyBio advocates the use of a VCST as part of the detox program. The principle behind the VCST is to examine the clearness or sharpness of images and detect visual patterns. They regard the eye as a window into the brain (which is 60% lipid), with the retina as one of the highest in cellular membrane complexity. The lipid membranes of the eye and their associated neurons are rich in high-performing lipids with a profusion of double bonds that provide the high level of energy necessary for optimum sight.

Lipid-soluble neurotoxins hide or fixate themselves in the lipid portion of the membrane and degrade vision. Improvements in the test score can provide feedback that healing is taking place elsewhere in the body. Even without a VCST, you’ll notice an improvement in your eyesight.
Avatar and Vega Testing Machines
I have used a variety of testing procedures in an attempt to get to the bottom of my health issues. Oddly, having used conventional blood tests and not had any light shed on my situation, the breakthrough came with the identification of high levels of lead from a hair mineral test.

Lead and mercury were then subsequently picked up a few years later (despite my attempts to detox with my Harley Street doctor) after having a Vega test (see below), which also showed the presence of metals. This result was again produced by a nutritionist familiar with this new form of detoxification, with the aid of an Avatar machine.

The Avatar test indirectly measures the energetic system of the body. The inventor of the machine, Dr Voll, found that at certain specific locations on the body, the electrical flow is much more conductive, and these points generally correspond to the Eastern Medical Acupuncture points. Therefore, you can use an impedance or OHM meter to test the acupuncture points. It simply measures skin resistance to a small electrical voltage. The electrical flow (conductance) gives an indication of the energetic health status of the meridian being tested. For example, if you are testing the Liver Meridian with an EAV instrument, the meter will give an indication of the Liver Meridian's energetic status.

According to the designer of the Avatar, Rober Eanes, "The puzzle of what is really going on with a particular patient is locked deep within the cells." An example may be pesticide toxicity causing liver disorders.

A standard blood test generally reveals absolutely nothing about this condition. Taking chemical assays of the blood and urine may give a doctor some indications of pesticide toxicity, but it is very doubtful whether the indications will point specifically to the liver. More detail can be found at: http://www.veradyne.com/

The Vega test machine works on a similar basis of skin conductivity. Unfortunately meridians and acupuncture points as yet cannot be measured by the scientific community and therefore according to them these test are invalid.

They are completely valid for this customer!
SECTION 4: YOUR BODY'S DEFENCE SYSTEM

The Immune System
The highly complex immune system is made up of:

- The Lymphatic System: a network of vessels containing lymph, a transparent fluid that contains white blood cells and that carries nutrients to and waste from the body’s cells.
- The Spleen: filters the blood, looking for foreign cells.
- Bone marrow: trillions of cells produced here grow into the many types of more specialised white blood cells that circulate throughout the immune system. One type of cell, Lymphocytes, comes in two major classes, B-cells and T-cells. B-cells mature in the bone marrow and produce antibodies. Referred to as immunoglobulins and gammaglobulins, they're classified into five classes: IgA, IgD, IgE, IgG, IgM. They are Y-shaped proteins that circulate in the blood and lymph streams where they attach to foreign antigens such as bacteria, viruses, fungi, and toxins and ‘mark’ them for destruction by other immune cells. T-cells: these mature in the thymus in the chest and patrol the blood and lymph for foreign invaders. They not only ‘mark’ the antigens, they attack and destroy diseased cells that they recognise as foreign. They also produce hormones: known as Lymphokines, which can kill micro-organisms or cancer cells. Tymosin, for example, encourages lymphocyte production. It is also known that certain hormones in the body suppress the immune system. Steroids and corticosteroids (components of adrenalin) suppress the immune system (remember adrenalin is pumped into the bloodstream when you are stressed). Other white blood cells include Neutrophils, which engulf foreign particles or bacteria and release enzymes, hydrogen peroxide and other chemicals from its granules; also Phagocytes and Macrophages, which ingest bacteria and microbes in the bloodstream and lymph.

Antibody Immune Response Mechanism
When the body is faced with an allergen, the immune system produces Y-shaped IgE antibodies to the foreign proteins, but rather than going directly after the foreign intruders, these IgE antibodies lodge tail-first on the surface of the mast cells.

Mast cells are found wherever the body comes into contact with the outside world and therefore (with allergens) they are found in the skin, in the mucous membranes of the eyes, nose, and throat and in the lining of the lungs and intestine. By the time the initial IgE response is complete, each mast cell has between 100,000 and 500,000 Y-shaped antibodies protruding from its surface.

Airborne plant pollens’ foreign proteins activate the IgE branch of the immune system, and IgE antibodies are quickly posted on mast cells in vulnerable pollen-exposed areas, such as the nose, respiratory tract and eyes. Unfortunately, when we later encounter foreign proteins again, our mast cells are already primed for them.

IgE antibodies on the cells trap the foreign proteins, the cells release histamine and other chemicals that infiltrate the skin and other tissues close to the activated mast cells. These chemicals cause all the symptoms of inflammation: itching, dilated and leaky blood vessels, swelling, excess mucus secretion, hence the streaming nose, sneezing, coughing, and itchy, watery eyes. Similarly, if the invaders are dust mites that find their way into the lungs, the allergic reaction can trigger the wheezing and shortness of breath associated with asthma. Likewise, a meal of shellfish can produce the upset stomach and diarrhoea associated with food allergy.
When the body is faced with an invasion of foreign viruses or bacteria, it responds by producing masses of Y-shaped IgG antibodies. These antibodies float freely in the bloodstream, looking for distinctive proteins on the surfaces of microbes which label/signify them as foreign. When they encounter the intruders, the Y-shaped molecules seize them and hold them down for the immune system's killing cells, the macrophages that digest the bacteria. The antibodies act like a bridge between the foreign particles and the killer cells, bringing them together.

**Factors that Affect Immune System Functioning**

**Environment**
A high ‘toxic load’ (toxins being heavy metals, chemicals, bacteria, viruses, parasites) creates a polluted internal environment. This means the immune system has to work harder, identifying and eliminating toxins which lowers its efficiency, putting the body at risk from the growth of tumour cells. It’s now recognised that cancers start to grow relatively frequently within the body; it’s just that the body’s T-cells destroy them.

**Stress**
This alters the hormonal balance of the body. (See the section on Chronic Fatigue Syndrome in SECTION 2.)

**Drugs**
Pharmaceutical drugs, such as anti-biotics, destroy beneficial bacteria in the intestine. These bacteria act as a pro-biotic, protecting the colon and bowel. Steroids are powerful anti-inflammatory drugs that directly decrease the immune response by lowering the amounts of immunoglobulin A, G, and M antibodies in the bloodstream and increasing the quantity of the body’s natural killer T-cells. Overactive natural killer cells can also attack the body's own tissues, leading to diseases known medically as autoimmune diseases. Problems of immunodeficiency include opportunistic infections by micro-organisms that are normally held at bay.

Recreational drugs also lower immune functioning. Research has shown that the immune system cells, including the lymphocytes and natural killer cells, and their products (cytokines) are less active in protecting your body after cannabis and marijuana have been consumed. As a result, you may get infections more easily or be more susceptible to disease than non-users.

**Free Radical Damage and Antioxidants**
(Also see the section on Chronic Fatigue Syndrome in SECTION 2.) The body’s cells are in a constant fight between oxidative damage and the process of repairing themselves. Anti-oxidants are the nutrients that provide this safeguard against cellular damage. Vitamins, minerals and enzymes are able to donate one of their own electrons to these free radicals, thus neutralising their effects.

**Nutrition**
This is another crucial player in the body’s defence system. Research shows that the immune system declines with age and becomes less effective. The reason for this decline is not actually old age but because elderly people have been found to be depleted in all the key nutrients. Nutrition is essential for healthy immune functioning. The body needs to obtain roughly only 40 essential vitamins, minerals and nutrients for it to manufacture some 10,000 chemicals, which enable the trillions of cells in our bodies to remain fully functioning and healthy. Because the body can’t produce these in sufficient quantities, it is vital that we obtain them from our diet. A nutrient is a substance the body needs for growth, repair and maintenance. Nutrients include proteins, carbohydrates, essential fatty acids (lipids), vitamins, minerals and water. So what are these substances?
During digestion, proteins get broken down into amino acids: these supply the raw materials for cell growth and repair. Proteins are made up of amino acids and are found in meats, milk, poultry, fish, cereal grains and beans. There are twenty amino acids found in proteins, of which humans can make eleven. The remaining nine are the essential amino acids that must be supplied in the diet.

Normally, proteins are not used for energy. However, during starvation, muscle proteins are broken down for energy. Excess protein can be used for energy or converted to fats.

Carbohydrates, derived from grains, nuts, vegetables and fruit and berries, must be broken down into monosaccharides and are the body’s main source of energy.

However, it is lipids (fats) that generate the greatest energy yield, and many plants and animals store energy as fats. Lipids are found in meats, oils, butter, plants (such as avocado and peanuts) and seeds. Of these, the essential fatty acids (EFA) are crucial to good health. They’re called essential because the body can’t function without EFAs being supplied from the diet.

EFAs include both omega-3 (alpha-linolenic acid) and omega-6 (linoleic acid) fatty acids. Together, they’re used to create prostaglandins, the hormone-like chemical messengers responsible for regulating blood pressure, pain and inflammation, energy metabolism, cardiovascular and immune health. EFAs account for approximately 60% of brain and nerve tissue and they function to serve as building blocks for the membranes of every cell in the body. The primary function of EFAs is to maintain the liquid barrier surrounding each cell, known as the cell membrane, and to transport nutrients (amino acids, hormones, minerals, vitamins and water) in and waste out of cells. Good sources for EFAs are legumes, nuts, seeds, dark leafy greens and flaxseed oil. When present in the intestine, lipids promote the uptake of vitamins A, D, E, and K.

Vitamins are organic molecules that can’t be made by the body and that are usually needed in trace amounts. They are required for metabolic reactions and tend to act as coenzymes or precursors to coenzymes. Some vitamins are soluble in fats, some in water. Many enzymes require a cofactor to assist in reactions. These ‘assistants’ are non-protein and may be metal ions (not heavy metals) such as magnesium (Mg), potassium (K) and calcium (Ca).

The cofactors bind to the enzyme and participate in the reaction by removing electrons, protons, or chemical groups from a substance. Cofactors that are organic molecules (as opposed to metal ions) are coenzymes. In oxidation-reduction reactions, coenzymes often remove electrons from a substance and pass them to other molecules. Often the electron is added to a proton to form a hydrogen atom before it is passed. In this way, coenzymes serve to carry energy in the form of electrons (or hydrogen atoms) from one compound to another. The chemical structures of vitamins can be broken down by cooking, storage and even oxygen, thereby reducing their potency.

Minerals are trace elements required for normal metabolism, as components of cells and tissues, and for nerve conduction and muscle contraction. They can only be obtained from the diet. Iron (for haemoglobin), iodine (for thyroxin), calcium (for bones) and sodium (nerve message transmission) are examples of minerals. Minerals found in soil and water, on the other hand, are inorganic and retain their chemical structure, as they are utilised by plants and animals that we, in turn, consume.

Finally, water is required for metabolism and chemical reactions within the body, for transport of substances around the body, and for regulation of body temperature. Approximately two-thirds of the body weight is water.
It is important to realise the need for nutrition is vital when you are boosting immune functioning. This and not detoxing are why I never made any progress with tedious food diaries and rotation diets. It also made me neurotic about foods because I would link a particular food to a physical reaction: it’s your body not the food causing the problem.

There is a measurable relationship between nutrients and health. Imbalances can cause disease. Many studies have concluded that nutrition is a major factor in cardiovascular disease, hypertension, and cancer. The expression “you are what you eat” is completely accurate.

N.B. Just as a deficiency in vitamins and minerals can lead to health problems, so taking too many supplements can also cause problems, as well as causing imbalances in the absorption of other vitamins and minerals. For example, 150 to 450mg of zinc per day has been associated with a low copper status, altered iron function, reduced immune function and reduced levels of high-density lipoproteins (the good cholesterol). Taking too much iron (greater than 25mg/day) can contribute to arthritis, high blood pressure, dizziness and headaches, along with decreased zinc absorption.

Information on supplements and safe dosage levels can be found on the National Institute for Health’s website at: http://ods.od.nih.gov by clicking on the Site Map and looking for Health Information and then Health Info/Dietary Supplement Fact Sheets.

However, the guides to optimal daily nutrient intakes within this eBook are higher than Government recommended daily allowances (but still within those safety limits) because, according to Dr Paul Clayton’s book *Health Defence*: “The way we live makes it impossible to obtain all the nutrients we need from even a ‘well-balanced’ diet.” He points out that Recommended Daily Allowances (RDAs) were not formulated to achieve optimal health but merely to provide a safety net to prevent deficiency diseases. It is worth noting that some vital nutrients don’t even have RDAs and those that do are average amounts. Obviously, there’ll be differences in individual needs depending on stress levels, age, the birth pill, and alcohol consumption.

*Dr Paul Clayton was a former Senior Scientific Advisor to the UK Government’s Committee on the Safety of Medicines.*

The condition of your hair and nails can give an instant indication of your vitamin and mineral status. Hair should have body, strength and shine; it shouldn’t be dry and break easily. Nails should be strong and also shine; they should not have ridge/groove lines or be pitted.

Deficiencies in vitamins and minerals contribute to the absorption and retention of heavy metals in the body, and retention is totally dependent upon an individual’s balance of these protective nutrient minerals. Without adequate minerals, the effects of metal toxicity can be more far-reaching. This is because minerals act as a buffer and bind to metal ions and so play a part in the transport and elimination of metals. As an example, the absorption of toxic metals such as mercury, lead and cadmium is increased when a protein deficiency is present, especially in the sulphur compounds. Sulphur is important in protecting cells from the toxic effects of heavy metals such as enzyme inhibition and excessive free radical production. (Foods high in sulphur amino acids include animal protein, fish and garlic.)

The accumulation of lead has a greater detrimental effect upon body chemistry when there are insufficient levels of calcium and iron.

Iron function is adversely affected by lead, and if lead levels remain high or increase, iron absorption becomes compromised – iron deficiency can cause various forms of anaemia.
It has also been established that essential mineral elements such as sodium, potassium, magnesium, manganese, copper, zinc, chromium and nickel are all depleted when the body becomes toxic with heavy metals.

Referring to the high levels of disease in a lot of Western countries at the beginning of this eBook, it’s easier to appreciate now how important the effect of good nutrition is.

If you look at the rate of cancer and heart disease in countries such as Spain or Italy where they are a fraction of the UK’s, it’s obvious that their Mediterranean diet plays a big part in this. Their diet includes mono-unsaturated fatty acids found in olive oil, flavonoids in red wine, and other anti-oxidants such as lutein in kale and lycopene in tomatoes. Again, if you look at France and Italy, in terms of breast cancer and prostate cancer they don’t do as well as Asian countries that are protected due to their high consumption of soy products, green teas, selenium and a low intake of saturated fat and calcium.

Remember, it’s the saturated fats from commercial high temperature processing of oils (as high as 230º in some cases) and margarines that are the problem, not all saturated fats. The Inuits, for example, live off a high-fat, red meat diet with hardly any intake of vegetation, and their health is remarkable, with resistance to MS, heart disease and cancer. Why? Because what they eat is natural, and they avoid all the killer foods rich in carbohydrates that are mostly nutritionally poor.

I used to shop at supermarkets and think that the food produce I was buying was nutritious – but consider these facts. Profit is the key motivation to economic survival for food companies; costs have to be cut somewhere. That’s either on produce or production techniques (to market). Looking at prepared supermarket fruit and vegetables, evidence by the consumer magazine Which? (UK) has found that they can contain as little as one tenth of the nutrients found in varieties sold loose. Vitamin C levels from melon to broccoli fall well below those found in fresh raw produce. One supermarket’s sliced runner beans had 11% of the normal level of vitamin C. Another’s melon slices had just 42% of the expected vitamin C content. So, unfortunately, even though the food looks fresh and clean, it isn’t necessarily providing you with its full goodness, vital when you consider that fruit and vegetables are a rich source of anti-oxidants, as are herbs such as green tea, liquorice, ginger, ginseng, turmeric and garlic.

Other anti-oxidants include Vitamin C, which is water-soluble and provides anti-oxidant protection to the blood and lymph, and Vitamin E, which is fat-soluble and protects the fatty structures of cell membranes. Here are some other considerations that affect our nutritional intake, particularly as we reach middle age 40+.

**Soil Depletion**

Intensive farming has reduced plant mineral absorption. Many soils have become depleted in minerals. In the past, fields had longer fallow periods, enabling decomposition and greater nitrate absorption. The average mineral content of fruits and vegetables has declined substantially in the last 50 years. Between 1941 and 1991, magnesium levels declined by 25%, calcium by 47%, copper by 62% and iron by 36%.

**Absorption**

We become more depleted from protective micro-nutrients as we get older. This is due to less physical activity and therefore less appetite and lower food intake and also because ageing decreases the micro-nutrient capability of the digestive system.
**Dietary Changes**

Our diets have changed dramatically. Remember, as hunter-gathers we would have developed our digestive system to the surrounding food stock, which was predominantly vegetation, nuts and berries. This diet supplied us with greater levels of nutrients than is possible from most of today's processed foods, which offer far lower levels of nutrients than our bodies were designed for.

The average annual intake of sugar in Western countries 100 years ago was approximately 9kg per head (20lbs). Today, the average annual intake of sugar in the UK and US is 45kg per head. The body needs more than 100 years to adapt to this ‘rapid’ change in diet!

This will be explained later in SECTION 5, when I discuss the importance of insulin (the hormone that controls your blood sugars) in the detox, and you’ll also start to see why toxin retention and weight gain are the norm for a lot of people.

**Stress Levels and Lifestyle**

The demands of modern life, especially in a city, can be intense. The speed of life has changed dramatically. People ‘eat on the go’, often relying on fast food and snacks which offer little nutritional value; lunch breaks average 36 minutes, and the demands placed on many employees are counter-productive. The UK has one of the highest levels of absenteeism and sick days off in Europe.

To enable the immune system to remain strong and function effectively it needs an optimum number of vitamins and minerals such as vitamin A, E, C, the B complex vitamins, and the minerals potassium, magnesium and sodium as well as zinc, copper, iron, selenium amongst others.

Incidentally, University of Alabama researchers confirmed that individuals who take 2000mg of vitamin C every day live an average of 5 years longer!

**The Kidneys**

The kidneys are located in the middle of the back, just below the rib cage, on either side of the spine. One of the main functions is to filter and remove waste products (urea, ammonia, drugs, toxic substances) from the blood and eliminate them in the urine, while retaining water, amino acids (proteins), glucose and salts.

They also regulate the composition of the blood, calcium levels, blood pressure, and the concentrations of various ions; they keep a constant volume of water in the body and maintain a constant acid/base concentration of the blood.

The entire blood volume gets filtered approximately 20 to 25 times each day. Any metals transported in the blood can affect the kidneys. Whereas many toxic compounds can be broken down to make them less toxic, metals aren’t able to be broken down to reduce their toxicity. Some metals, however, can be made less toxic by the addition of chemical groups to the metal. For example, arsenic can be made less toxic by the addition of a methyl (CH3) group.

Metals can have different amounts of charge, and these charged atoms easily and quickly form complexes with enzymes and other biological molecules. The amount of charge also affects how easily the metal can get into cells. Iron, for example, in the Fe++ form, can’t cross membranes very easily. This restricts where it can go in the body, whereas mercury, Hg+, can easily penetrate membranes and is quickly distributed around the body. Mercury binds to membrane proteins, disrupting their regular work of reabsorption of water and important solutes.
In the periodic table, most metals are located near each other. This means they have similar properties and can behave similarly, one easily replacing another in a protein or molecule. Let’s take a look at how different metals affect the kidneys.

Lead is a toxic metal that can cause damage in the tubules within the kidney, where it inhibits the functions of the cells’ mitochondria (the cells’ engines). Eventually the cells aren’t able to reabsorb substances as they’re supposed to.

Mercury causes problems by binding to the sulfhydryl groups on proteins. The kidney may mistake the protein with mercury on it for a cofactor called glutathione, an important natural detoxifier. The kidney normally filters glutathione out of the urine and retains it. When it does this to the proteins with mercury bound to them, it effectively concentrates the mercury in the kidneys. The mercury can go on to react with other proteins and enzymes in the cells and can eventually kill the kidney cells, leading to diseases associated with kidney failure. Mercury can also damage the CNS.

Cadmium, found in very high concentrations in some soils in Japan, causes women who eat rice grown on cadmium-rich soils to develop anaemia, damaged kidney tubules, and bone and mineral loss. Normally cadmium is excreted from cells when it binds to a protein called metallothionein (CdMT). This serves to protect most cells from damage, but in the kidneys the cadmium metal-protein complex is easily absorbed in the tubules. Once inside the kidney cells, the cadmium is released from the MT protein and can accumulate to toxic levels.

Chromium moves around the body as Cr04 until it reaches the kidneys, where it mimics potassium and sodium. It is filtered out of the filtrate and reabsorbed by the tubule cells and becomes very concentrated. There it can interfere with ATP energy exchange and can become a corrosive acid. Both of these interfere with the kidneys’ normal functions.

**The Adrenal Glands**

I’ve included the adrenal glands in this body’s defence section, as they play a role in how the body copes with stress from illness, and they are affected by toxicity.

The adrenal glands sit on top of the upper end of each kidney. Adrenal hormones are divided into two groups, those produced in the adrenal medulla and those produced in the outer cortex.

Adrenalin and noradrenalin hormones are produced in the medulla. These are powerful, fast-acting neurotransmitters which initiate the ‘fight-flight’ response when the nervous system senses danger (physical or psychological). These hormones immediately constrict the blood vessels and raise the blood pressure and blood sugar levels. Blood flow is reduced away from the digestive organs and toward the muscles and brain (this partly explains why food is difficult to digest if you try to eat while under stress), the pupils dilate and the speed of reflexes increases.

The hormones produced by the adrenal outer cortex are aldosterone, cortisol, cortisone, testosterone, DHEA, DHEAS, androstenedione and estrogens. Cortisol and aldosterone are two very important hormones produced by the body. Cortisol is the stress hormone and is involved in weight control, immune response, the health of skin and bones, and cardiovascular functioning. Its levels are increased by stress and severe illness.

The cortical hormones have a slower, more prolonged action. Cortisol and cortisone convert amino acids and glycogen to glucose. The corticosteroids, as they’re known, are anti-inflammatory and provide a mild sense of euphoria. Cortisone and
hydrocortisone are also needed to regulate fat, carbohydrate, and protein metabolism. Cortisol levels roughly correspond to the potassium level from a hair test.

If the adrenals are making too little cortisol, the pituitary compensates and makes more of the hormone ACTH. If the pituitary is not working, both ACTH and cortisol levels may be low.

Aldosterone’s primary function is to increase sodium retention by the kidneys. It is also a pro-inflammatory hormone, which enables healing. High levels correspond with high blood pressure and low potassium levels. Deficiencies of aldosterone are much less appreciated than deficiencies of cortisol and lead to low blood pressure and salt-cravings, dizziness or light-headedness and palpitations. Aldosterone levels roughly correlate with sodium levels on a hair mineral analysis.

A balance between aldosterone and cortisol is necessary to maintain health. This balance is associated with the ratio of sodium to potassium on a hair mineral analysis. The optimum sodium/potassium ratio is about 2.4:1. If aldosterone secretion is high, ratio-wise to cortisol, inflammatory conditions such as gastritis, colitis, arthritis and sinusitis result. This often corresponds with a high ratio of sodium to potassium on a hair analysis.

If cortisol secretion is high ratio-wise to aldosterone, diseases such as diabetes, immune-deficiency syndromes, infection, arteriosclerosis, atherosclerosis, cataracts, glaucoma, coronary heart disease or cardiomyopathy may result. This corresponds to a low ratio of sodium to potassium on a hair analysis.

**Adrenal Exhaustion**
Symptoms of adrenal exhaustion can be directly linked to a reduced secretion of the hormones described above when under stress.

**Symptoms**

<table>
<thead>
<tr>
<th>Allergies</th>
<th>Joint aches and pains</th>
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<tbody>
<tr>
<td>Apathy</td>
<td>Low blood pressure</td>
</tr>
<tr>
<td>Circulation – poor</td>
<td>Low blood sugar levels</td>
</tr>
<tr>
<td>Constipation</td>
<td>Low self-esteem</td>
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<tr>
<td>Decreased tolerance to cold</td>
<td>Low stamina</td>
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<tr>
<td>Depression</td>
<td>Lowered resistance to infection</td>
</tr>
<tr>
<td>Fatigue</td>
<td>Muscle weakness</td>
</tr>
<tr>
<td>Fearfulness</td>
<td>Subnormal body temperature</td>
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<td></td>
<td>Sleep – requirements increase</td>
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</tbody>
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**Usual Causes of Adrenal Exhaustion**

- Genetic defects can be a cause of physical and emotional stress that can weaken the adrenals.
- Congenital weakness (present at birth) caused by nutritional deficiencies of the mother that are passed on to the child.
- Nutritional imbalances from inadequate diets, poor food quality or digestive problems that prevent proper absorption.
- Emotional or psychological stress. This kind of continued stress will eventually deplete the adrenal glands. Shock from bereavement can also deplete the adrenals. Emotional stress can begin in childhood or at any time in life. It is actually the resistance or fear of a situation that causes the stress response. A loving response will produce much less of a reaction, no matter what the situation.
- Other possible stresses include family pressures, school/work/social/financial pressures. People who force their bodies to be ‘on the go’ all the time tend to
exhaust their adrenal glands. This can only be balanced by adequate rest and sleep.

- Mental attitude makes a great difference in determining the stress response. Worry, fear, anger and resentment tend to increase the stress response. An attitude of gratitude and compassion for oneself and others tends to diminish the stress response.

- Stimulants ‘whip’ the adrenals. There may be short-term benefits but the long-term effect is to weaken the adrenal glands. Stimulants include sugar, alcohol, caffeine, theobromine in chocolate, amphetamines, cannabis, marijuana, cocaine, heroine and pharmaceutical drugs. Other stimulants can include loud noise, loud music, excessive exercise. Anger, fear and worry can act as stimulants as well.

- Infections can act as internal stresses that, if left untreated, can eventually weaken the adrenals by forcing the body to mount a chronic stress response.

- In the absence of these usual causes of adrenal exhaustion, very often chemicals, heavy metals, parasites and viruses are overlooked – they all have an impact upon the adrenals’ ability to produce the correct balance of hormones. Toxic substances include chlorine in water, polluted air, mercury from dental fillings, household chemicals, solvents, food additives, pesticide exposure, dusts, moulds, bacteria and pollens. These often cause allergies that can be controlled with adrenalin or cortisone, the adrenal hormones. Medical therapy, particularly cortisone or prednisone therapy, weakens the adrenals by creating hormonal imbalances.

- Congenital defects may also be caused by toxic metals or other toxins passed on through the womb that interfere with the functioning of the adrenal glands. This is a very common cause of adrenal insufficiency.

The prevailing attitude, especially in light of the UK Government’s relaxation and downgrading of the classification of cannabis and marijuana in relation to the law, suggests that these drugs are harmless. However, these drugs stimulate the adrenal glands into producing adrenalin and noradrenalin at completely inappropriate times (remember these hormones are designed to be produced in a short-term stress scenario).

With high consumption, and this includes the use of all stimulant drugs, it is very easy for these adrenal glands to become ‘exhausted.’ Long-term drug misuse causes these glands to become enlarged. The aftermath of this behaviour can be an extended period (months or years) of what can only be described as listlessness.

(One point also worth mentioning is that many drugs are ‘bulked out’ with fillers to increase weight and profitability. Cannabis has been found to contain henna, shoe polish and sleeping pills, meaning that what you’re ingesting can be having a far greater toxic impact upon your body than you could possibly realise.)

For my ‘adrenal exhaustion’, my Harley Street doctor prescribed me the hormone DHEA and recommended that I take a teaspoon of pure salt every day (this combined with a healthy diet). This made little difference to my health. In the detox you will be taking supplements to deal with the effects of toxins; you’ll also be advised to take saunas as these help cleanse toxins (see SECTION 5). Meditation and attitudinal adjustments (letting go of resentments, fears, blame) are also beneficial.

**The Liver**

The liver is situated immediately under the diaphragm on the right side of the upper abdomen (see Fig 1. in SECTION 2). It is probably one of the most important organs we have – running a close second to the digestive tract – in its determination of our overall health and wellbeing, both physically and mentally.

Generally, the liver has two critical functions: 1. making new chemicals from food nutrients to be then used throughout the body, and 2. neutralising body waste by-
products either by breaking them down into safer substances or by eliminating them from the body.

Its functions include:

• Involved with carbohydrate metabolism for energy production and boosting blood sugar levels, i.e. the formation of glucose from certain amino acids, lactate or glycerol, and the storage of sugars as glycogen and the conversion of glycogen back into glucose when blood sugar levels drop.
• Breaks down insulin and other hormones.
• Involved in lipid (fat) metabolism: cholesterol synthesis for brain and nerve cells, production of triglycerides.
• Production of coagulation factors.
• Storage of a multitude of substances, including vitamin B12, most of the B vitamins if they were in the diet, iron (in a form where it can be delivered to the bone marrow for the formation of new red blood cells), copper, minerals, enzymes and vitamins that can be utilised by the body’s cells.
• Neutralisation of toxins, most medicinal products and haemoglobin.
• Kupffer cells filter bacteria, viruses and antigens.
• Produces and excretes bile to digest fats (see below). Some bile is stored in the gall-bladder.
• Conversion of ammonia into urea.

No other organ other than the liver has such a widespread effect on virtually all other organ systems. Looking at some of these processes now in detail, it will begin to become clear just how crucial the role of the liver is, and how its toxicity causes a myriad of other health problems that can be extremely hard to diagnose. If we look at protein digestion, for example, once protein has been digested and converted into amino acids in the stomach and intestines, the liver sets about recombining these amino acids for our bodies to use. These may be used as tissue proteins, in our muscles, organs such as our heart and kidneys and blood vessel walls.

The proteins may help form immunoglobulins that are part of the immune system or are used as part of the endocrine system. Protein hormones such as insulin affect our blood sugar levels, glucagon affects our sugar levels and energy, and calcitonin affects bone calcium levels.

Amino acids may be also be used to make amino acid derivatives that act as neurotransmitters, e.g. serotonin or hormones such as thyroxine or adrenalin. Imbalances of oestrogen, progesterone and testosterone can cause a variety of problems including PMT, difficult periods in women, menopausal problems and sexual dysfunction.

As well as this, if there’s too much of one type of amino acid and not enough of another, the liver converts the excess amounts of the first amino acid into the required amount of some types of the partially deficient ones.

The liver’s handling of fats also has a crucial impact upon the body’s health. The liver synthesises the fat in the diet into a variety of compounds called lipoproteins. You’ve no doubt heard of ‘bad cholesterol’ and ‘good cholesterol.’ Technically, this is nonsense. Even bad cholesterol or low density lipoproteins (LDLs) carry out vital functions. LDLs are needed to transport lipids, as EFAs, along with ‘bad cholesterol’ to the cells, because they are essential for cell growth and eicosanoid production (remember, these are the super hormones necessary for virtually every body system to function).

Cholesterol is important because it’s the primary structural component of every cell in the body. It is the building block for all the steroid hormones produced by the adrenal glands. Without cholesterol, many of the body’s hormonal systems wouldn’t work. It is also needed to make bile to digest and absorb fats, and for the synthesis of vitamin D
to keep bones strong. It is needed to make reproductive hormones and to make the cortisone-type hormones that are important for both the immune system and for handling stress.

Cholesterol is also needed in very significant amounts, for all the nerve cells and for the brain. Remember the brain is 60% lipid in structure and the richest source of cholesterol.

The problem is that too much LDL can cause cardiovascular problems and blocked arteries, so what is more relevant is the ratio of good cholesterol to bad cholesterol, or LDL to HDL.

Note, however, that low cholesterol diets don’t lower cholesterol levels. Eighty per cent of the body’s cholesterol is produced in the liver, and the enzyme that controls its synthesis (HMG CoA reductase) is influenced by the hormone insulin, which activates this enzyme, resulting in higher cholesterol levels. And what influences insulin production? High sugar intake.

Glucagon, on the other hand, reduces the enzymes’ action and cholesterol levels in the blood fall. Therefore, the amount of sugar in the diet plays a direct role in affecting insulin levels that in turn affect cholesterol production – too much of which causes arteries to become furred and blocked.

The ‘good’ lipoproteins or HDLs are responsible for carrying cholesterol from the tissues and eliminating it from the body via the gall-bladder.

Carbohydrate metabolism is critical in maintaining concentrations of glucose in the blood within a narrow, normal range. Excess glucose entering the blood after a meal is rapidly taken up by the liver and sequestered as glycogen (chains of glucose molecules that act as a glucose reserve).

Later, when blood concentrations of glucose begin to fall, the liver activates other pathways, which lead to glycogen being converted back into glucose and into the blood for transport to all other tissues. The low glucose level in the blood causes the release of hormones to stimulate breakdown of glycogen into glucose. When no glucose or glycogen is available, amino acids (proteins) are converted into glucose in the liver.

Faulty liver functioning can produce fatigue through hypoglycaemia (low blood sugar levels) and inefficient utilisation of B vitamins. If the liver doesn’t correctly make the proteins needed to carry iron and copper through the bloodstream or play its part in getting the iron to the bone marrow, this can cause anaemia.

The liver processes literally thousands of chemicals as it detoxifies the body. There are two stages to detoxification:

1. The conversion of toxins into intermediate metabolites, e.g. the conversion of ammonia from proteins into urea.
2. These metabolites are further broken down ready for excretion via the kidneys or the bowel.

These are the everyday toxins that the liver processes:
- Industrial airborne pollutants
- Car fumes
- Cigarette smoke
- Household and cosmetic chemicals
- Pollutants that come from the result of the damaging effects of radiation and electromagnetic fields (even sitting in front of the television can cause problems)
- Toxic chemicals in foods due to agricultural processes, food processing and preserving, and also the water supply
- Toxins from toiletries applied to the skin, from drugs (social or medical)

Added to these are the toxic substances made by the body as we metabolise used tissues and materials such as hormones that have carried out their job.

A liver that is struggling to remove toxins also causes the body to produce allergic reactions. This is because the liver breaks down hormones. If this task is impaired, the levels of white blood cells (remember the B and T-cells?) and antibodies fall below normal. Severe over-toxicity can result in mood swings, behavioural problems, candidiasis and psychiatric problems.

If you experience difficulty in losing weight, one explanation may be that, as mentioned before, many toxins are fat-soluble, so if your liver is unable to process toxins, it stores them in the adipose (fatty) tissue of the body. Once stored in these tissues, the toxins are less harmful, but it is only until the toxins are eliminated from the fat cells – by increasing the cells’ permeability and therefore the delivery of nutrients into the cells and toxins out of the cells – that the fat cells will break down. This simple protection mechanism avoids the sudden release of toxins into the system. Therefore, your body may not break down the adipose tissues even when you reduce calorific intake and try to burn off the fatty tissue for energy.

Also toxic metals affect amino acid sulphur chemistry. This also affects the ability to metabolise fat for energy. Liver flushes address this by releasing these toxins (See SECTION 5.)

Damage to the liver can result from many things including:
- Late nights (this is the time when the liver is working hardest to detoxify the body)
- Cigarettes, drugs (social and medicinal) and alcohol
- Bad fats, such as chocolate, mayonnaise and cream

Finally, the liver’s pivotal role in the maintenance of essential trace metals and detoxification of exogenous (harmful) metals is attributed to its ability to extract metals efficiently from blood plasma, metabolise, store, and redistribute them in various forms either into bile or back into the bloodstream. The liver is a target for metals for several reasons. If a person ingests a toxic metal, the first organ to be exposed to it, after the intestines, is the liver. One of the liver’s primary functions in the body is to remove and detoxify toxicants. The liver is loaded with enzymes designed to process and break down foreign chemicals. These enzymes process many oxidative reactions, so there are often reactive, potentially toxic chemicals present.

The Gall-bladder
The gall-bladder is located beneath the liver. Attached to it is the bile duct, which delivers bile through the biliary tree (a system of ducts/veins) from the liver and gall-bladder into the small intestine.

Bile is a bitter, greenish-yellow alkaline fluid secreted by the liver. It is stored in the gall-bladder between meals and is discharged into the small intestine, when we eat, where it aids the process of digestion, especially of fats, due to the action of bile salts, which emulsify fats, making them susceptible to enzymatic breakdown. Besides its digestive function, bile serves as the route of excretion for haemoglobin breakdown products (bilirubin), which give bile its colour.

If the composition of the bile is less than optimum due to faulty liver function or inadequate fats supplied in the diet, this can lead to the formation of gallstones, small accumulations that build up within the gall-bladder, reducing both its ability to store
bile and to secrete it properly. Gallstones can be made of either calcium salts, in which case they can be detected by X-rays, or cholesterol.

As fat-soluble neurotoxins move through the cells of the body from the GI tract to the sinus, the lungs, the eyes, muscles, joints, and nerves, they eventually enter the liver and the bile. Once neurotoxins bind with bile they have access to the liver, and the body becomes poisoned over and over again as the bile is re-circulated (first released into the intestine to digest fats, and then reabsorbed).

Unhealthy bacteria have been known to colonise the liver and its biliary system. These bacteria, as well as viruses, can synthesise very long-chain saturated or renegade fats (Harrington et al 1968, Carballerira et al 1998) that lead to liver toxicity, biliary congestion, impairment of prostaglandin (hormone) synthesis and impairment of the release of glutathione (Ballatori et al 1990).

The structural double bonds of the omega-6 and omega-3 (EFAs) lipids are essential to life, and these provide all 70 trillion cells with their flexible nature. When renegade fats are over-represented in the cell membrane, they may cause cellular death.

Healing the outer leaflet of the membrane (Schachter et al 1983), comprised primarily of phosphatidylcholine, with phospholipid therapy, is one of the highest priorities in addressing chronic illness and hypercoagulation. Phospholipid therapy in the detox means that you orally take a phosphatidylcholine supplement to repair cell membranes.

Low-fat diets and the subsequent lack of bile production can impair biliary flow, which would be incompatible in attempting to clear toxicity. This is because bile is paramount to cleansing the body and getting biotoxins and heavy metals excreted into the faecal matter. Coffee enemas are used in the detox to stimulate the gall-bladder and clear toxins out into the gall-bladder and biliary tree and also to repair the outer leaflet of the cell membranes.

Other issues with faulty bile production include difficulty digesting fats, which results in bloating after meals, and even nausea. It's also likely that stools will be pale, since the colour comes from the bile pigments, or that they float, or there may even be fat in them and they stick to the toilet and are difficult to flush.

Bile also stimulates the peristaltic action of both the small and large intestine, which helps to prevent constipation and other intestinal problems. Constipation can increase the formation and absorption of several different toxins. It also helps to prevent candida, as proper movement along the intestines reduces the risk of developing a stagnant environment in which the candida yeast can flourish.

Bile also helps to prevent allergic, or food sensitivity, reactions within the GI tract and so can reduce such problems as gastritis, spastic colon and irritable bowel syndrome, all of which can be aggravated by food sensitivities. Importantly, maintaining a healthy internal environment, proper peristaltic action and liver bile function can help to reduce the risk of bowel cancer. When you are constipated, a number of toxins can build up in the digestive tract and become absorbed into the bloodstream. They then have to be dealt with by the liver in its role as a detox organ.

If your liver does not deal with them, your body tries to get rid of them in other ways. This may result in or aggravate skin problems as you try to eliminate them through the pores. It may put an excessive load on your kidneys. You will almost certainly find grey circles under your eyes and white fatty deposits in tissues such as the skin under your eyes and on your limbs. If all else fails, you may store the toxins in your adipose (fatty) tissues.
Toxins in the digestive tract can move back up the system, causing bad breath. Liver cleansing will stop this.

As a final point on the liver, jaundice occurs when the characteristic yellow tint to the skin is caused by excess haemoglobin breakdown products in the blood, a sign that the liver is not functioning properly. Jaundice may occur when liver function has been impaired by obstruction of the bile duct and by damage caused by hepatitis. Hepatitis A, B, and C can all cause liver damage. Cirrhosis of the liver, through heavy drinking, places the liver in a stress situation due to the amount of alcohol being broken down.

The Bowel
The large intestine has already been covered in detail (see SECTION 2, under Irritable Bowel Syndrome), but it is worth emphasising here that the efficient elimination of waste products from metabolic activity and environmental toxins is essential for good health. I knew someone who used to think it was normal to go to the toilet once a week. Health books tell you should be going three times a day. I believe once, maybe twice, a day to be sufficient.

As you are aware, the large intestine, bowel, or colon, as it is referred to, is the organ responsible for enabling toxins to be collected and expelled. It is also an organ where they can also be reabsorbed back into the bloodstream from the intestinal wall – if the condition of the mucous lining of the colon is impaired. The removal of mycelial candida (root form), parasites (which tend to collect in the gall-bladder) and the built-up faecal matter on the colon wall must be eliminated if you are to detox successfully. Coffee enemas (and liver flushes) are an effective method for removing these toxins from the colon and rectum.

The Skin, Muscle and Bone
The body’s ability to deal with toxins such as heavy metals is remarkable. When it is unable to eliminate toxins over and above what it is able to excrete, it transports these toxins to sites throughout the body and stores them.

As we already know, heavy metals are fat-soluble. This means that they tend to bind to structures that are rich in fat. As they are transported by the blood they can end up being stored in the fat cells within the organs – typically the liver, gall-bladder, GI tract, the brain and the adipose (fatty) connective tissue of the body – where they are stored as a defence mechanism.

As briefly mentioned above, if you think of all the warnings about fish such as salmon having higher levels of toxins present within them, this is precisely because they are rich in fat compared to say haddock or cod, which don’t accumulate the same levels of toxins.

The skin is the largest elimination system that the body has. It helps in eliminating toxic waste products from the body. Heavy metals such as mercury are frequently released through the skin when you sweat. The structure of the skin comprises three layers: the epidermis, the dermis and the hypodermis.

1. The outer layer is the epidermis. It is composed of dead horny cells formed by the protein keratin and a basal cell layer underneath, where the new cells are manufactured. The new cells move upwards to the surface, where they expire and are then exfoliated. The epidermis has no blood vessels or nerves.
2. The dermis is made up of connective tissues which include collagen protein and elastic fibres (also made of protein), which form a valuable support system to the skin. It is in this layer that the majority of the skin’s ageing process takes place. The sweat glands, the oil glands, the nerve endings and receptors, blood vessels, and a major portion of hair follicles are also located in the dermis.
3. The *hypodermis* is a subcutaneous tissue or fatty layer situated below the dermis. The hypodermis helps to support the delicate structures, such as blood vessels, nerve endings and hair bulbs. The layer gives contour and shape to the body and acts as an emergency reservoir of food and water.

There are two sets of glands found in the dermis, the sweat glands and the oil glands. The sweat glands are employed in the elimination of the water-soluble cellular waste. The oil glands secrete oil, which lubricates the skin surface. This prevents the skin from excessive dryness.

Blockages, congestion, over activity or under activity of these two sets of glands are considered the primary cause of numerous skin problems.

Lipomas are the medical term for fatty lumps of tissue that can appear under the skin as a result of metal toxicity. They dissolve once the body begins detoxifying (See SECTION 4.)

Not only do the skin and the fatty tissue of organs act as storage sites for chemical and heavy metal toxins but also so do the muscles and bones.

There are three types of muscle:
1. **Skeletal** muscles that are composed of many cells: muscle cells are also called muscle fibres.
2. **Cardiac** muscle, which is found in the heart.
3. **Smooth** muscles that line the gut, blood vessels and reproductive tract.

If you are experiencing a great deal of muscle tension, I recommend you take a teaspoon per day of the highly effective ‘Ultra Muscleze’ available from Nutri Ltd. 44 (0)1663 718850 or visit [www.nutri.co.uk](http://www.nutri.co.uk)

Bone is composed of fibres of a protein called collagen that are embedded in hardened calcium phosphate and other minerals. The strength of bones is due to the combination of fibres and hardening minerals. Apart from providing support and protection while enabling movement, bones also store calcium and phosphorus. They also produce blood cells and it’s in the bones that the maturation process of the B-lymphocytes occurs.

If we look at some of the most common metal toxins, clinical evidence has established where they tend to accumulate.

The majority of inhaled *lead* is absorbed directly into the blood where it’s circulated and distributed primarily in the soft tissues – kidneys, brain and muscle – and bone. Adults distribute about 95% of their total body lead to their bones, while children distribute about 73% of their total body lead to their bones (US Environmental Protection Agency (E.P.A) 1986a). The reason for this is that lead mimics calcium, a metal that is a major component of healthy normal bones.

*Aluminium* tends to accumulate in the brain, muscles, liver, kidneys, lungs, reproductive organs, stomach, skin and bones (American based Agency for Toxic Substances and Disease Registry A.T.S.D.R. 1990). Depending on the source of exposure, aluminium can be absorbed through the GI tract or the lungs. Absorption through the GI tract takes time but, once absorbed, it is distributed to the liver, brain, testes, soft tissues and bones.

Orally consumed, *arsenic* is readily absorbed through the GI tract and can also be absorbed through the lungs, where it is later absorbed through the stomach after (respiratory) mucociliary clearance (A.T.S.D.R. 1989) Arsenic compounds are primarily
distributed to the liver, kidneys, lung, spleen, aorta and skin. Arsenic compounds are also readily deposited in the hair and nails (US E.P.A. 1984).

Absorption of copper can occur through the lungs, GI tract and the skin (US E.P.A. 1987). Once absorbed, copper is distributed primarily to the liver, kidneys, spleen, heart, lungs, stomach, intestines, nails and hair. Individuals with copper toxicity show an abnormally high level of copper in the liver, kidneys, brain, eyes and bones (A.T.S.D.R. 1990a).

The absorption and distribution of mercury depends upon whether it's the inorganic or organic form (the inorganic form occurs when elemental mercury is combined with chlorine, sulphur, or oxygen, the organic form occurs when mercury is combined with carbon).

The most common form of organic mercury is methyl mercury, which can be produced by small organisms in water and soil when they are exposed to inorganic mercury. Organic mercury compounds are absorbed from the GI tract more readily than inorganic mercury compounds. After absorption in the GI tract, organic mercury is distributed throughout the body but tends to concentrate in the brain and kidneys (Goyer, 1991b). Approximately 80% of mercury vapour is absorbed directly through the lungs and distributed primarily to the CNS and the kidneys (Friberg and Nordberg, 1973). Inorganic and organic forms of mercury have also been seen in the red blood cells, liver, muscle tissue and gall-bladder (Peterson et al, 1991. Dutczak et al, 1991 A.T.S.D.R. 1989a).

N.B. If you are experiencing muscle tension and twitching, this can be relieved by taking magnesium supplements, or possibly calcium or potassium. Take a hair test to determine your deficiency (See SECTION 3.) With its mild anti-stress, tranquillising effects on the body, magnesium can help relax skeletal muscles. Chronic deficiencies of magnesium have been linked with muscle pain.
SECTION 5: DETOX

Chemical and heavy metal toxicity is normally the result of long-term, low-level exposure to pollutants common in our environment: air, water, food and numerous consumer products.

This detox program is aimed at eliminating these toxins that may have proved hard to eliminate in previous attempts – this was my experience. This detox is not only aimed at a steady and safe removal of toxins, but also the rebuilding and repair of all the cell membranes within the body.

It does not attempt to detox years of accumulated toxins in five or ten days or whatever the current fad is. These detoxes are probably neither that effective nor probably that safe. In my opinion, I also don’t believe juicing and fasting are good for the person who’s had serious health problems, as these can be too harsh on the body. I have heard of people that have detoxed too fast and caused irreparable damage to their kidneys. Detoxing without supervision isn’t advised for this reason, and also the experience of detoxing can sometimes be as unpleasant as the symptoms you are trying to alleviate, and you may need professional advice that I am not qualified to give.

Popular therapies known as chelation, which rely on intravenous (IV) solutions (EDTA and DMSA) to eliminate heavy metals, have been shown to be effective, but also potentially harmful. Alternative oral chelation therapies have been developed that are safer than the traditional IV therapies and are just as effective, as they rely on nutritional substances that have been shown to help detoxify heavy metals and help support the body's overall health.

A doctor’s Detoxx™ Book is available from: http://www.bodybio.com/ which gives the nutritionist/practitioner an understanding of the theory behind, and how to conduct, this form of detox.

The Detoxx™ System
The detox is designed to:
• Cleanse the lymphatic system and the liver and biliary tree.
• Modulate the immune inflammatory markers, the cytokines.
• Stabilise the essential fatty acids held within cellular phospholipids (phospholipids are any fat that consists of a phosphate group and one or more EFA's).

The Detox Diet: No More Blood Sugar Swings

Your Insulin Holiday

Many anti-candida diets involve the removal of carbohydrates from the diet yet allow you to eat, for example, brown rice. These diets fail for two reasons: 1. carbohydrates feed candida, and 2. they fail to understand enzyme functioning and the relationship between carbohydrates and the hormones insulin and glucagon.

Because a low carbohydrate diet feels restrictive and vastly different from what now makes up a Western diet (where sugar is now so overused that you can even find it in corned beef), many people complain about the diet, saying it’s impossible and give up on it. This is a mistake. It is essential to burn fat cells that store the toxins.
To this end I have now created a low carb, good fats nutritionist approved recipe ebook: Detox – Your Food Freedom! The recipes are delicious, easy to prepare and nutritionally balanced and aren’t all meat based. This was a major criticism of The Atkins and South Beach Diets (along with not so good fats) that in my opinion makes following them unsustainable. The recipe ebook has many vegetarian dishes that will counter over acidity of the blood that results from the above mentioned diets.

As a special courtesy it is at a reduced price to all my readers. Please visit: http://www.thiscureworks.com/ibsrecipes

There is a fundamental reason why the detox cuts out carbohydrates in the diet. (You still eat some carbohydrates, for example in nuts or vegetables.) To understand this we need to know a little about what happens when we eat carbohydrates (sugars, bread, starchy vegetables, potatoes, fruit, etc.).

The body responds differently depending on whether food is carbohydrate, protein or fat.

It’s worth looking at how we evolved, as it highlights how absolutely ridiculous our modern sugar-rich diets are. Five hundred million years ago, we weren’t about on this planet. However, eicosanoids (the super hormones that control all our body systems) were. These were the first hormonal control system for living organisms to interact with their environment; they existed in sponges. Four hundred and fifty million years later, the paired endocrine hormones (those that are secreted from a gland, the pancreas, into the blood) insulin and glucagon, appeared.

Evolution designated eicosanoids to be that control system over those hormones and how an organism responds to food, and nothing has changed in this regard for hundreds of millions of years. By the time man appeared 100,000 years ago, this control system was deeply embedded in the genes, and genetic changes evolve very slowly. Therefore, as a species, our bodies don’t react very well to changes in our embedded dietary patterns.

As hunter gatherers, our insulin responses evolved in the face of the uncertainty over our food supply. Faced with long periods without food, the body developed a system for storing nutrients. **Insulin** is effectively a storage hormone. Its role is to take excess glucose from carbohydrates and amino acids from protein and convert them into fat.

The body always needs a constant supply of carbohydrates in the blood to feed our glucose-hungry brains. So the body continually takes carbohydrates and converts them into glucose, and insulin is released to drive down sugar levels in the blood to keep them constant. Any excess carbohydrate not immediately used by the body is converted into glycogen (a form of glucose) and stored either in the liver or the muscles.

Only the glycogen in the liver (not the muscles) is accessible to the brain – because it’s easily broken down and used. This store lasts about 12 hours, meaning the liver’s glycogen levels must be maintained on a continual basis. That’s why we eat carbohydrates. The problem comes when we eat too many carbohydrates. Once the glycogen levels are filled in both the liver and the muscles, *excess carbohydrates gets converted into fat and stored in the adipose (fatty) tissue.* And remember, it’s fat cells we’re trying to break down and convert so that they release their toxic load. *Eating carbohydrates makes this biologically impossible.*

The biological opposite of insulin is **glycagon.** Instead of acting as a storage hormone as insulin does, glycagon mobilises stored carbohydrates from the liver by converting
glycogen back into glucose to be released into the bloodstream. Whereas insulin is stimulated by carbohydrate intake (proteins also produce an insulin response but far less than carbohydrates), glucagon is stimulated by protein intake.

The aim of the diet is to consume foods that have very low carbohydrate content and any content they have to be low on the glycaemic (US glycemic) index. This index measures how fast a carbohydrate is broken down/digested and converted into glucose in the bloodstream. High glycaemic foods raise the blood sugar levels too fast, promoting an elevated insulin response.

The glycaemic index of a food depends on the structure of the simple sugars it contains, its soluble fibre content and its fat content. Surprisingly, puffed rice cakes have a higher glycaemic index than normal table sugar. What this means is that they produce a higher insulin response and create higher insulin levels pumped into the bloodstream, which basically instructs the body to store fat and keep it stored.

The fat content in foods such as fibre content actually slows the rate of entry of carbohydrates into the bloodstream. Fats also cause the release of cholecystokinin (CCK) from the stomach, which tells the brain you’re full.

If you are experiencing blood sugar swings, you may be suffering from either hyperglycaemia (an excess of glucose, from high carbohydrate intake) that exists in the bloodstream or hypoglycaemia (a deficiency of glucose in the blood). This can be diet-related but can also be caused by parasites, harmful bacteria in the intestines or faulty liver functioning.

Obviously, these typically high carbohydrate diets that we eat nowadays upset this critical hormonal balance, and we can see how successful the ‘high carbohydrate diets’ have been in reducing weight; we’re in the middle of an obesity epidemic! So much for fats making you fat and overweight. In fact, you have to eat fats to lose fat; just make sure they’re from high quality sources.

There is another problem with high insulin levels: they increase the chance of diabetes, where you get insulin resistance, and insulin no longer effectively brings down blood sugar levels. After the detox, the correct balance of protein to carbohydrate to fat that you should eat in your meals is 40% carbohydrate to 30% protein to 30% fat. On the plate, that’ll mean that your carbohydrate portion will look about twice as large as your protein portion. Eat in this ratio, and you’ll maintain a healthy balance between good and bad eicosanoid production and its dramatic impacts upon not only blood sugar and therefore energy levels, but also upon immune system functioning, cardiovascular health, CNS functioning, the reproductive system...

Now we understand the effect that cutting out carbohydrates has on fat metabolism and it results in lower insulin levels, we can look at two of the main effects of this:

1. REDUCED insulin response causes DECREASED Phospholipase 2 (PLA 2) enzyme action. And the reason this is so important is because the activity of the PLA 2 enzyme rises dramatically in states of toxicity (biotoxins or heavy metals) and causes increased inflammation and metabolic distortion plus the loss of essential EFAs from phospholipids in the cell membrane. The solution is dietary control of carbohydrates, which directly lowers PLA 2 and inflammation.

Also, because cholesterol, phospholipids and their essential fatty acid components are the most predominant types of lipid found within the brain, they play a vital role in the cell signalling systems in the neuron and in neurotransmitter functioning. The generous use of phosphatidylcholine supplements (more detail in supplements section) stabilises the lipid status of all cell membranes.
Another effect of cutting carbohydrates from the diet is:

2. REDUCED insulin response and INCREASED glutathione enzyme action. Biotoxins and heavy metal toxicity decrease the levels of glutathione produced by the body. However, a high protein diet supports the body in forming its own glutathione, one of the most essential and powerful substances our immune systems produce. Glutathione is a naturally occurring protein with antioxidant properties produced by the cell which protects every cell, tissue and organ in our bodies. Glutathione helps the liver filter the blood and helps protect cell enzymes from damage. It participates directly in the neutralisation of free radicals, reactive oxygen compounds and maintains antioxidants such as vitamins C and E in their reduced (active) forms. It is able to directly fuse together with foreign substances along with also having potent anti-viral properties.

Note that a lack of glutathione has been linked to CFS. Also well known and studied are the individual genetic differences in glutathione availability. Studies show glutathione to be significant in enabling mercury bound together with glutathione to be cleared from the blood more readily, preventing mercury from entering red blood cells. For a thorough look at the glycaemic Index of Foods visit: http://www.glycemicindex.com/

For a scientific explanation on the principles of the Detox that is beyond the scope of this eBook visit: http://www.townsendletter.com/Nov_2002/detoxxsystem1102.htm

Supplements (see page 80: What to do NOW to determine which supplements you may need).

(Phos Chol) Phosphatidylcholine (BodyBio, US)
This supplement is a fat that is taken daily (I took 4 capsules twice daily). Its benefits include:
• Major component of cell membranes and component of the GI mucosal protective lining. Maintains and improves membrane fluidity.
• Prevents/treats microbial fungal and viral infection by phosphoglycerides.
• Increases blood choline levels necessary for proper brain functioning. Also acts as an essential precursor for acetylcholine, a neurotransmitter.
• Reduces Low Density Lipoproteins (bad cholesterol) and increases HDL.
• Heals toxic liver damage. Improves cell regeneration, enzyme functioning, inflammation, reduces fatty deposits from tissue. Aids Leaky Gut Syndrome, which can be brought on by candida or the use of NSAIDs (Non Steroidal Anti Inflammatory Drugs such as Ibuprofen and Naproxen).
• Boosts immune system strength.

Chlorella (Klinghardt, UK) See FAQs for higher dose regime.
An oral chelation agent that binds to metals and is safer than IV therapy. Chlorella algae are microscopic small water plants and, although a vegetable, its detoxification ability, immune enhancement and anti-viral characteristics are highly effective. I took 12 tablets before bed.
Benefits:
• Some detox agents have multiple mechanisms by which they bind to metals. The algal organism chlorella has over 20 such known mechanisms.
• Chlorella has a strong affinity for both heavy metals and neurotoxins. Chlorella possesses a three-layer cell wall, which shows strong adsorptive properties against toxins such as dioxins and heavy metals (e.g. mercury, cadmium or lead). Chlorella has the ability to bind heavy metals, pesticides and toxins and carry them safely out of the body.
• It dramatically increases glutathione production.
• Super nutrient: 50-60% amino-acid content, ideal nutrient for vegetarians, methylcobolamin, the most easily absorbed and utilised form of B12, B6, minerals, chlorophyll and beta carotene.
• Immune system strengthening.
• Restores bowel flora. Chlorella pulls toxic metals through the mucosal surface of the intestines from the blood and protects the kidneys.

One of the most powerful, effective and safe heavy metal chelation products with a wealth of scientific research behind it. Start slowly, increasing up to 4 sprays under the tongue three times per day away from food.)
• Pure Body is a natural mineral, zeolite. The negatively charged zeolite clinoptilolite works like a magnet attracting positively charged toxins and safely carrying them out of the body within hours.
• Pure Body finds and absorbs heavy metal and chemical toxins by firmly bonding them to its surface or within its cage-like crystalline structure. Unnatural contaminants have no way of reattaching to and damaging the body as they are flushed out.

**Probiotics Flora Synergy** (Energetix, US)
The probiotics used on the detox are taken to displace the bad bacteria and yeast in the GI tract with good bacteria. Capsules are taken that repopulate the colon with millions of Lactobacillus Sporogenes and Fructo-oligosaccharides.

These probiotics work because, unlike the normal probiotics that are commercially available, these reproduce themselves once inside the intestinal tract. They are also enterically coated, so they’re protected and not killed off by gastric acids produced by the stomach.

Other cultures that are rich in beneficial bacteria include acidophilus, bifidobacterium, lactobacillus, escherichia coli. Kefir (a drink from the Caucasus Mountains) and goat’s yoghurt are also good sources.

I started taking 2 capsules twenty minutes before food 3 times per day. After two months of detoxing, I did a ‘Flood’ to tackle my candida problem.

The two-month wait was to make sure that I was detoxing metals out of my system. It is not possible to eliminate candida until they are being removed. If your colon has a total of 3lbs of bacteria, and you want to replace 1lb with good bacteria, you need to take a lot of probiotic capsules, or a flood as it can be called.

If the bacterial capsules contain 250mg, and you need 1lb, which equals 0.45kg, the number of capsules is: 0.45kg divided by 250mg = 1800 pills. The Flood = 36 capsules/day for 50 days (of probiotics). I took 6 capsules twenty minutes before food 3 times per day and 18 capsules before bed.

Note also that Biotin found in most Multi B Vitamin complexes helps stop the mycelial form of candida from flourishing.

Note for IBS sufferers – take for stomach cramps.

**Vitamin C (Ascorbic Acid)** (BodyBio)
I took ½ teaspoon (2,000mg) mid-morning and up to two more times per day, all with 20 drops of trace minerals. Greater doses than 10,000mg/day start to have negative effects, flushing out calcium and other minerals.
• Vitamin C is essential for efficient immune system functioning. Immunity involves the determination of the self from the non-self, and attacking only foreign bodies.
Immunoglobulins protein molecules (antibodies) have the power of recognising 'not-self' cells and combining with them, marking them for destruction.

- Raises glutathione production in the body.
- High intake of 'C' manufactures more antibody molecules, types IgG and IgM.
- Shown to be very beneficial to protect the body from heavy metals as well as aid in excretion and detoxification.
- Lead salts aren't very soluble in the body and therefore don't move very fast, making detoxification time-consuming.

**Butyrate** *(BodyBio)*
This is a short chain fatty acid and fat-soluble nutrient that was taken as 6 capsules twice per day. It’s also found in butter.
- Has a powerful ability in mobilising renegade fats, sequestering ammonia and clearing biotoxins.
- Clears the liver and biliary tree, GI tract and bowel of fat-soluble toxins/renegade fatty acids (odd and very long-chain fatty acids).
- Inhibits bacterial growth in the stomach.
- Decreases pro-inflammatory cytokine (immune response) expression.

Butyrate synthesis can be inhibited by Hydrogen Sulfide (H2S) and Sulfites. Bacteria or fungi have a special defence mechanism (called a 'resistance gene') that produces Hydrogen Sulfide (H2S), a highly toxic and poisonous gas, which binds to the heavy metal molecules, such as mercury, and neutralises them. This gas can impair the immune system, especially in the area of neutrophil function, which fights yeast in the GI tract. (It can be tested for.) H2S is very similar to mercury, in that it can bind to many of the things that mercury binds to and can inactivate them. H2S can also convert the safer inorganic mercury to the more dangerous organic mercury.

**BodyBio Balance Oil** *(BodyBio)*
I took 1 tablespoon 3 times per day of this EFA with protein.
- The effects of this ratio are an increase in polyunsaturated EFAs and a reduction of cholesterol in the neuronal membrane of the brain.
- The result is improved membrane structure and behavioural functioning (Yehuda et al 1999). *All detoxification functions depend on optimal oxygen delivery and blood flow, which depend on optimal cell membrane fluidity.*

**Oral Electrolyte Concentrate** *(BodyBio)*
These minerals are *important*, comprising sodium, potassium and magnesium.
- Enables transport of toxic waste across the extra-cellular space towards the lymphatic and venous vessels.
- Adding a balanced electrolyte solution in small amounts to water helps to restore intra- and extra-cellular fluid balance and therefore maintain cellular health.

When the mineral balance is altered by a toxic environment, this demands *far greater mineral/nutrient levels*. (Cells extracted from a chicken heart were kept alive for 28 years just by keeping them in a saline solution with the correct balance and composition of minerals found in the chicken’s blood. The cells only finally *died* when the scientists could no longer see the point of running the experiment!)

**Liquid Trace Minerals** *(BodyBio)*
These include magnesium, chloride, sodium, potassium, sulphate, lithium and boron. I took 20 drops once or twice per day with Vitamin C powder.
- Crucial for maintaining body systems including immune, GI tract, brain, heart, liver, kidneys, hormonal systems.
- Supports body in relieving it of toxins and heavy metals.
**Evening Primrose Oil** (BodyBio)
This is an omega-6 EFA. It is high in linoleic acid (LA) and gamma linolenic acid (GLA), which is depleted in states of toxicity. Almost one third of cell membranes are made up of omega-6 fatty acids. I took 3 capsules x 2 per day.
- EFAs support the immune system, GI tract, kidneys, liver, brain, hormonal system and skin.
- Arachidonic acid (AA) is derived from dihomo gamma linolenic acid (DGLA) which itself is derived from GLA.
- AA is the main eicosanoid that controls functions such as inflammation, growth, reproduction, gut motility, mucous control, PH, heart rate and brain development.

**Ox Bile** (Nutrilink, UK)
Supplements the liver’s production of bile, essential for fat digestion. I took 1 500mg capsule after meals.
- Adequate cholesterol levels in the body protect it from toxins, as cholesterol and bile unite with toxins and heavy metals and help to move them out of the body through the faeces.

**Galt-immune** (Energetix)
This is a combination of fish protein and bovine colostrum that helps repair tissue damage caused by the mycelial form of candida that causes leaky gut syndrome.

**Pepogest** (Higher Nature, UK)
This is a digestive enzyme containing 180mg peppermint leaf oil. It is used in preparation before liver flushes. I took 2 capsules 30 minutes before each meal throughout detox. Digestive enzymes are essential to enable you to absorb the nutrients in your food. Digestion is very typically under par when the body is overwhelmed with pathogens and toxins.

**Lipase** (part of ‘Supergest’ by Higher Nature UK)
This is another digestive enzyme that helps in the digestion of fats. I took 1 to 2 after each meal.

**Ground Organic Flax Seed** (BodyBio)
Flaxseed is rich in omega-3 fatty acids, alpha linolenic acid (ALA). I took 1 tablespoon 3 times per day.
- ALA is high in lignans, which have antioxidant properties (and act as a natural anti-cancer agent).
- Normalises bowel function and reduces constipation that can occur as you detox.

**Vitamins and Minerals**
Heavy metals displace minerals by attaching themselves only in places that are programmed for attachment of healthy metal ions.

Mineral deficiency provides the opportunity for toxic metals to attach themselves to vacant binding sites. *A healthy mineral base is a must for all metal detox attempts*, (magnesium, potassium, copper, selenium, zinc, molybdenum, manganese, chromium. If these last two are deficient, food cravings can trigger candida symptoms).

*Substituting minerals can detoxify the body by itself.* Vitamin C complex, vitamin E complex, B complex vitamins, the sulphur amino acids methionine, cystine and cysteine (in whey and Vianesse egg protein powders, good for weight gain) calcium and magnesium all appear to have beneficial effects in stimulating elimination and minimising toxic effects.
**Magnesium Formula 1** (Archturus Healthlink UK)
This is effectively a multi-vitamin with trace minerals, vitamin A and multi B vitamins, biotin and selenium. I took one 3 times per day with food. Vitamin A aids GI mucosal integrity. Magnesium clears toxicity from the cells.

**Vitamin B Complex** (Archturus Healthlink)
Vitamin B complexes must have balanced quantities of vitamin B1, B2, B5 and B6. I took 1 twice a day with food. N.B. Candida can make the thiaminase enzyme that breaks down thiamine or vitamin B1, before it can be absorbed.

**Amino acid supplements** (Vianesse NL)
Soy, egg or whey protein powders, especially with a concentrate of branched chain amino acids, are valuable in heavy metal detoxing. I used 2 scoops of Vianesse BodyShape egg protein powder once or twice per day.

**Ionic Silver** (Natural Immunigenics, US)
Order the Argentyn 23 parts per million concentration. 1 teaspoon 3 times per day. Take away from food. Hold under the tongue for 30 seconds and swallow.
- This is not to be confused with Colloidal. Ionic silver particles are 1,000 times smaller and more effective at disrupting the activity of bacteria and yeast.
- They can enter cells at this particle size and are able to cross the blood-brain barrier and also enter the spinal fluid. Non-toxic to humans, with a bitter taste, it is believed that silver works like a secondary immune system.
- Watch out for unpleasant symptoms associated during the yeast ‘die-off’ period. Up intake of water to counter.

**Candizyme** (Ultimate Balance, UK)
3 capsules 3 hours after food or at bedtime
- Contains a digestive enzyme known as Iysozyme that breaks down the tough chitin-based structure of the cell membrane/walls of the candida yeast.
- Attacks the components that yeast may use as food sources.

**Coconut and Palm Oil** (Higher Nature)
These are saturated short-chain fatty acids that are stable when heated, as are butter and olive oil. Commercial sunflower/safflower oils are high in polysaturated fats, which, although healthy, are virtually destroyed by the high temperatures they endure during processing and cooking. (They also contain high levels of omega-6.)
- Lauric acid, the fatty acid found in large quantities in both coconut oil and in mother's milk, has strong anti-fungal and anti-microbial properties.
- Coconut oil protects tropical populations from bacteria and fungus common in their food supply; as third-world nations in tropical areas have switched to polysaturated vegetable oils, the incidence of intestinal disorders and immune deficiency diseases has increased dramatically.

**Freeze Dried Garlic** (Klinghardt)
Start with 1 per day increasing SLOWLY up to 3 capsules after each meal.
- Kills fungi and protects the white and red blood cells from oxidative damage, caused by metals in the bloodstream.
- Garlic contains numerous sulphur components, including the most valuable sulph-hydryl groups, which oxidise mercury, cadmium and lead and make these metals water-soluble. This makes it easier for the body to excrete them.

**Cilantro** (Energetix)
- An effective agent in mobilising mercury stored in the intracellular space (attached to mitochondria, tubulin, liposomes etc.) and in the nucleus of the cell (reversing DNA damage of mercury). Take AFTER fillings have been REMOVED.
• Cilantro is capable of mobilising mercury, cadmium, lead and aluminium in both bones and the CNS. Because cilantro, also known as coriander, mobilises more toxins than it can carry out of the body, it may flood the connective tissue (where the nerves reside) with metals that were previously stored in safer hiding places. This process is called re-toxification. It can easily be avoided by simultaneously taking an intestinal toxin-absorbing agent. A recent animal study demonstrated rapid removal of aluminium and lead from the brain and skeleton superior to any known other detox agent. Even while the animal was continuously poisoned with aluminium, the bone content of aluminium continued to drop significantly during the observation period. Taken just before a meal or 30 minutes after chlorella, cilantro causes the gall-bladder to dump bile (containing the excreted neurotoxins) into the small intestine.

**Water**
Finally and most importantly, water is necessary to aid the detoxification process. The body is approximately 70% water. Without enough fluid intake, the kidneys might become contaminated with metals. The basal membranes swell up, and the kidneys can no longer efficiently filtrate toxins. Around two litres per day of pure bottled or filtered water are necessary on the detox to flush the system.

**Daily Levels of Vitamins and Minerals for Detox**

<table>
<thead>
<tr>
<th>Vitamin/Mineral</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vit C as ascorbic acid</td>
<td>4,000mg to 8,000mg</td>
</tr>
<tr>
<td>Vit E</td>
<td>270mg or 400IU</td>
</tr>
<tr>
<td>Omega-3 EFA</td>
<td>6g</td>
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<tr>
<td>Omega-6 EFA</td>
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<tr>
<td>Evening Primrose Oil</td>
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<td>Calcium</td>
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<td>Vit B 6</td>
<td>50mg</td>
</tr>
<tr>
<td>Vit B 3</td>
<td>100mg</td>
</tr>
</tbody>
</table>

Optional detoxifiers: N-Acetyl-Cysteine (NAC) 600mg 2 per day. MSM (methylsulphonyl methane) 1,000mg 2 per day.

**What to do NOW**
I would advise that people have tests done, as outlined above. This will save time and expense in the long run. The list below represents companies that I personally used. Don't be daunted by the length! Your requirements will be TOTALLY dependent upon your test results.

For example, in the absence of any heavy metals, someone with IBS may only need to follow a low carb diet or take Paragone parasite cleanse from the Nutri Centre (See Parasite Cleanses below). For someone with 15 years of CFS, where metals seem to be the common denominator in 99.9% of cases, the list will include a lot of these products.

I would advise that you ease yourself into a low carb diet (when coming off the diet - introduce ONE CARB A DAY to avoid stomach upsets). Remember that by burning off the bodies fat cells, cells that store toxins, you are more likely to get a truer picture of your toxic body burden. The reason for this is that as the fat cells are burnt off they release their toxic load into the hair, blood and urine where they can more readily be picked up in tests (diet for 8 wks then test). That way you’ll avoid wasting 9 years thinking you have the all clear from a heavy metals blood test as I unfortunately discovered.
Bowel, Liver and Gall-bladder Flushes

Coffee Enemas
The GI tract has two functions:
1. To extract nutrition from foods so we can use it for growth, repair, and healing.
2. To get rid of waste.

Your stools are full of toxins. However, since many of the toxins can act as neurotoxins and the colon is lined with nerve endings, many of the mobilised toxins are reabsorbed into the body on the way down. (If you suffer from a leaky gut, this can explain why, after having gone to the toilet, you can feel less toxic and lethargic.)

The stool is the most toxic by the time it reaches the last part of the colon. Fortunately, nature has provided us with a system to deal with this: Entero-hepatic Circulation (ESC). This system enables toxins to be sent to the liver rather than being allowed to circulate back through the body. Caffeine is preferentially reabsorbed into the entero-hepatic system and therefore into the liver, where it has a strong detoxifying effect, causing the liver to unload toxins in the bile ducts. This then enables the liver to eliminate the backlog of toxins that have accumulated in organ tissues and the bloodstream. The caffeine also contains some alkaloids that stimulate the production of glutathione-transferase, an enzyme that helps the liver’s detoxification pathways. This enzyme is crucial in the formation of more glutathione, which, as we now know, binds to metals and toxins, enabling them to be eliminated from the GI tract.

- I would recommend doing the organic coffee enema after taking the chlorella, so that the chlorella is there to mop up the toxins produced by stimulating the release of bile in the small intestine. You may hear gurgling noises: this is the bile duct emptying below the right/centre of you rib cage. If you don’t hear this, consider using a little more coffee.
- Use filtered water/bottled water, not chlorinated tap water, and use olive oil to lubricate the tube which you insert two or three inches into the rectum. (Don’t use petroleum based lubricants such as KY Jelly.)
- I flushed the bowel for a minute with one to two cups of water and a few cap fulls of electrolyte concentrate and then used the toilet. Then I mixed a cup of water with three teaspoons of coffee and five opened Butyrate capsules and poured this into the bag, adding another half to a cupful of water, shaking the bag to mix it.
- Using some old towels, lie down on your back, insert the tube and hold the bag up to administer the mixture for 10-15 minutes. You can lie on each side for three minutes also.
- You can also empty the colon of coffee and redo another enema straight away. Do two coffee enemas for no more than 10 minutes each and, if you wish to save costs, just use the butyrate capsules for the last enema. (N.B. A double enema will...
affect the number of toxins released. The first double enema I did left me very spaced. I used enemas twice a week, sometimes more.)

There is no link between any cardiovascular problems and coffee. If you are allergic to coffee, note that the coffee is not reaching your systemic circulatory system. Maintain an electrolyte supplementation while doing coffee enemas (this is the only reported adverse effect from doing them, i.e. lowered levels of magnesium, potassium). The enema kit bags cost about £10 and are available from Nutrilink in the UK or possibly from your local chemist/pharmacist. You can reuse the kit as long as you periodically pour boiling water or peroxide through the bag and tube to stop any bacterial/mould growth.

**Liver/Gall-bladder Flushes**

Flushing the liver was absolutely necessary for me during my detox. The liver holds the key to so many health problems, and these started to improve as I flushed once or twice a week. After the fourth flush, the whites of my eyes actually started to look white again (they had been cloudy), and I believe, if I had been using a Visual Eye Contrast, my score would show continued improvement. My eyesight improved – and the speed of focus on distant objects.

It is necessary to **prepare** for **two weeks** before doing the flush first. I had to take: 6 capsules of Butyrate times 2 per day as well as 2 tablespoons of Bodybio Balance Oil times 2 per day and 3 Pepogest gels times 3 per day.

The flush involved my taking 20 Phos Chol capsules and 2 oxbile capsules two consecutive nights before bed and on each of the following mornings taking 20 chlorella tablets and 10 Mastica Gum capsules (Nutrilink).

**Parasite Cleanse Maintenance**

I recommend doing a parasite cleanse at least once or twice a year. There is a highly respected company at 7 Park Crescent, London W1B 1PF that I use called the Nutricentre. Their website is: [www.nutricentre.com](http://www.nutricentre.com)

They have an improved parasite maintenance kit that now simply involves a capsule and a liquid tincture (instead of lots of separate products) called ParaGONE by Renew Life. It includes all the necessary ingredients to kill parasites such as Wormwood, Cloves, Black Walnut, Pau D’arco and Caprylic Acid amongst others. Take 15 drops of tincture in water and 2 capsules 30 minutes before food 3 times per day for 15 days, then stop for 5 days, then repeat for 15 days. (Formulations are generally a lot stronger nowadays, so it is not necessary to take large quantities of these capsules as in the past.)

**Far Infrared Saunas**

Peer-reviewed literature shows that sweating during sauna therapy eliminates high levels of toxic metals, organic compounds, dioxin, and other toxins. Sauna therapy is ideal for mobilising toxins from the body. However, during a sauna, toxic metals can also be displaced from one area of the body to another. This means mercury can be shifted from the connective tissue into the brain. This problem is prevented by taking chlorella, cilantro and garlic.

Conventional saunas use electric heaters to superheat the air by convection. This then superficially heats the skin, producing increased heartbeat and vascular dilation as the body perspires as it tries to cool down. Toxins are only released through the sweat and the body loses water. Temperatures typically reach 150-220°F.

Far infrared (FI) saunas, on the other hand, use a form of heat energy that is directly transmitted onto objects without having to warm the air between them. This happens
because of the FI wavelength (which is similar to the sun’s). The perspiration not only contains more toxins with less water loss but also enables toxins to be expelled through the kidneys and liver. Consequently, these saunas only operate at a more comfortable 100-130ºF.

The website of Hightech Health, who make these saunas, is: http://www.hightechhealth.com/

They state that the super detox capability is caused by resonant absorption where the tissues absorb the FI rays, and the water in the cells reacts to the FI frequency, causing toxins to be eliminated into the blood and then excreted in the sweat, urine and faeces. This is backed up by other technical data I have read. I felt great after these saunas.

It is important, according to toxicologists, that the wood cabins are made from poplar, as they are with Hightech saunas and not the traditional cedar wood. This is due to cedar emitting toxic gases that can act as lung irritants.

Try to do 30 minutes to an hour (taking breaks if you feel too hot) as many times a week as is possible.

**Deep (Swedish) Massage**
Highly recommended for their ability to improve the lymphatic system’s capacity to remove toxins from the body, I strongly recommend deep tissue massages. When I had my first few massages, the lymph nodes (collection points where lymph vessels meet) at the top of my thighs near the groin, were so sore that I had to stop the masseur temporarily. After the first massage, I was very spaced-out for a few days due to all the toxins being released.

**Lymphatic Drainage Exercise**
This is a five-minute exercise either to carry out each day or on days when you feel sluggish to stimulate the lymphatic system. Remember, this system has no ‘pump’ to circulate the lymph fluid around the body.

- Raise your left arm in the air and, using your right hand, start patting the left arm throughout its length on all sides from the wrist down to the shoulder and under the armpit. Do this for 30 seconds or so. Repeat for the right arm.
- Use your four finger tips of each hand, starting in the middle of the forehead, massage, working out towards and over the tops and backs of your ears, applying pressure on the skin. Do this motion always from the centre out. Now do it above the eyebrows, under the eyes, across the cheeks, under the nose, across the mouth and chin.
- Massage from under the jaw, applying pressure down to the collar bone. Massage all 360º of the neck down.
- Using the hands, pat the tops of both shoulders simultaneously for 30 seconds or so.
- Using your fists, gently beat your chest in heartbeat rhythms (pairs) on the out breath. Do this for 30 seconds.
- Using the edge of the left hand thumb up to its wrist, use a rolling motion down (using right hand to steady left hand) by placing the side of the thumb from below the rib cage down to the hip on your right side to massage the liver. Do the rolling action downward, then move across by half an inch and repeat the motion down until you finally reach the centre of your stomach. Go across from the right to the centre a few times. Apply pressure and roll downwards on the out breaths.
- Now to massage the spleen on your left side, swap hands and, on the out breath, move the base of the palm of your left hand (using right hand to steady left hand) from the between the rib cage and the hip across towards the belly button. Repeat ten or so times on each out breath.
• Now for 30 seconds gently pat the kidneys repeatedly just above the hips from behind, using a hand for each kidney.
• Now pat the buttocks repeatedly three inches from the hip bones (to stimulate the collection of lymph nodes there).
• Standing on one leg (if you can’t, sit on a chair) from the ankle up, using both hands, pat the calf and thigh from all sides up to the groin. Repeat with the other leg.

These exercises at first may have an immediate effect and you may either sneeze a lot or your sinuses may become runny, or you may feel dizzy. This is to be expected as you start to move toxins. The lymph system operates better if periodically stimulated rather than being left static. Exercise also stimulates the flow of lymphatic fluid. Drink a glass of water afterwards.

Tips for a Successful Detox
• Drink a minimum of two litres of bottled mineral water or filtered water per day.
• Be prepared with a range of ready-made snacks so that when you are tired or don’t have time to make anything you have something immediately to hand.
• Power drinks e.g. egg or soy protein and ground almonds help to keep body mass up, as you may experience weight loss. I lost 10lbs in three weeks. They are also an excellent source of amino acids.
• Eat small and often instead of eating large meals.
• Remember to chew your food thoroughly to aid digestion.
• Replace your fluoride toothpaste with non-fluoride. Brands such as Kingfisher in the UK are ideal.
• For better absorption, take supplements at the beginning or during a meal unless otherwise indicated. Digestive enzymes are best mid or end of meal. With bloating, take away from food to digest unwanted matter in GI tract.
• Don’t rush it! You need to prepare by taking supplements for a minimum of two weeks before doing the colon and liver flushes. The supplements help mobilise the bile in your gall-bladder that can become ‘sticky’.
• Pay attention to your body’s energy levels. For example, don’t do liver flushes on days when you feel tired and exhausted; let the body’s energy pick up first.
• Goat’s yoghurt is very good at maintaining the bacterial flora necessary for a healthy gut and therefore absorption. This is because of its vitamin K content, also found in green leafy vegetables and kelp (seaweed).
• Soak your pine nuts, almond flakes, sesame and pumpkin seeds overnight in milk ready for breakfast in the morning.
• If you can’t get an organic source of oily fish such as mackerel, try tinned sardines. Although tinned, this is the lesser of two evils I believe as far as chemical toxins are concerned.
• And finally and most importantly, get seven to nine hours sleep a night. Your gall-bladder and liver work during the night from around 11pm clearing toxins, so late nights are counter-productive to cleansing.

Exercise
Unfortunately for those of you that don’t exercise (myself included until I discovered what I now know), exercise is essential to help remove toxins. If your energy levels are very poor, do not try to undertake heavy exercise, instead try a few minutes of breathing exercises or short walks to help; you should definitely be doing the lymphatic drainage exercises and consider having massages.

Research has shown that after exposure to mercury vapour, exercise mobilises metal toxins around the body, but it is not a factor in the total absorption and excretion of mercury. Mobilising metals and enabling the supplements to absorb/bind and transport is the reason for exercising.
If your energy is good, I suggest exercising for 20 minutes three times a week: that produces an increased heartbeat. It can be walking, a light jog, cycling, a swim, etc. Just be sure that you don't overdo it and overtax yourself. If you are low on adrenal energy, this is important. Never push or strain.

Consider this: by increasing muscle mass through exercise, we accelerate the use of carbohydrates and fats for supporting our energy requirements. Carbohydrate and fat metabolism for energy is regulated and absolutely dependent upon, sulphur chemistry in the body (derived from proteins). The entire pathway for carbohydrate/glucose storage as glycogen is also controlled by the body's sulphur chemistry. This sulphur chemistry can be compromised by deficiencies in the substances L-cystine (found in branched chain amino acids supplements or whey, egg, soy powders), pantothenic acid (vitamin B5) and lipoic acid and/or by carcinogenic and otherwise toxic metals that are known to affect sulphur metabolism. When this occurs, fat can't be metabolised for energy and remains as fatty tissue.

(Incidentally if you are having weight loss difficulties after having detoxed, there could be a hormonal or viral implication. Research by Dr Bhurandhar of the Department of Food and Nutrition at Wayne State University Detroit, found that the AD-36 virus found in Indian chickens alters the DNA of the pre-fat cells, causing an increase in body mass. It is known that because the weight of identical twins has never been found to vary by more than a pound or two: this is why twins make a good choice of study. They found twins from North Carolina where one of the twins was 40 pounds heavier than her sister. They tested her and her results showed she was antibody positive to the AD-36 virus.)

It is important to have quality protein or amino acids in your diet (organic or free range white meats/fish) to make fat metabolism work. Exercise contributes to this by causing a recycling of muscle protein that may contribute to the availability of L-cystine and other factors needed to make fat and glucose metabolism work properly.

The need for weight-bearing and other forms of exercise to maintain strong bones was graphically illustrated by the US space agency program. Without exercise, the bones disintegrate and the body becomes more ameboid or jellyfish structurally. Evidence has shown that calcium, found in bone, is absolutely necessary for the production of specific antibodies by the immune system. Antibodies, containing significant amounts of L-cystine, have been used to cure cancer and to fight off dis-ease. Also found in bone, magnesium and phosphate are essential for the production and utilisation of food for energy. The problem is that many toxic heavy metals are the same ionic size as either calcium or magnesium and thus can interfere with these important nutrients. (Remember lead mimics calcium and competes for absorption.)

Therefore exercise not only helps to break down weak and toxic bone and to build new and healthier bone, but it can also help to get the toxins out of the bone while putting healthy magnesium, phosphate, and calcium back into the bone. Once these nutrients become available, the body can use them as needed to help protect us from disease, and to produce energy from food.

**Electromagnetic Pollution**

The massive increase in wireless communications (phone masts, mobiles, headsets, DECT cordless phones and wi-fi internet routers, alarms, baby monitors, game consoles with wireless operated joysticks) has meant that many people are now subject to microwave radiation on a level that is unprecedented.

The problem is complicated because you may be subject to this radiation without even knowing it. E.g a neighbour has a digital cordless phone and base on the adjoining wall of a house of apartment which will still effect you - up to 20-30 feet radius. Or your
neighbours have gone wi-fi and connect to the internet using an internet router/base station. Note that most people wouldn't consider risking talking on a mobile for long periods of time but at the same time they are using base stations that emit microwaves 24 hours a day and cover as far as a 150 feet radius.

I would strongly suggest removing these appliances from your immediate environment because regardless of what the telecommunication industry "studies" have reported they have not been conducted over long enough time periods and independent peer reviewed scientific evidence has been shown that microwaves have an effect on melatonin levels and cause cellular damage. I am now starting to get people reporting symptoms to me that are different from the usual symptoms generally reported these include:

• Sleep disturbances (inability to sleep despite feeling tired)
• Fatigue
• Heart arrhythmia, other heart irregularities (noticeably increased strength of beat)
• Sickness
• Headache
• Memory and concentration issues
• Agitation
• Blurred vision
• Skin irritation similar to a prickling effect
• Nosebleeds.

I have come across reports of uncontrollable behaviour in two children who were being effected by a D.E.C.T. phone (digitally enhanced cordless phone) whose base station – the device that produces the wireless signal – was in their bedroom. When the parents replaced the phone with an older hands free phone the problem was resolved.

The solution:

It is necessary to strengthen the bodies cell walls with the correct balance of lipids (this is essentially what the detox advocates – good fats in the correct ratios). My electro sensitivity was due to this imbalance/factor. I had a lack of saturated fats and very low cholesterol when I had an Essential Fatty Acids test carried out.

For more information please see:
http://www.radiationresearch.org/
http://emfields.org/
SUMMARY

This is a summary of the Detox -- please consult with your healthcare professional. If you are sensitive to vitamins (or rather the effects they produce) then START SLOWLY AND USE A FRACTION OF THE AMOUNTS I USED. It is not a race! Always go at a pace that your body can handle. It is counter productive to make you body work too hard. If you feel DISCOMFORT ease off with the detox and increase your intake of: water, magnesium, vit C, chlorella, coffee and Butyrate enemas (I have heard of cancer therapies doing 6 a day) and do the lymphatic drainage exercises.

Parts 1 & 2 of the ebook describe the most likely cause of your health problems. Part 3 covers what to test for and parts 4 & 5 offer a solution.

1) Firstly you may have mineral and vitamin deficiencies - which can be tested through hair analysis amongst other methods - please see Part 3 of my ebook. Stress will also increase nutritional demands.

2) Your diet may not be sufficiently high in protein intake - amino acids from proteins like fish and meat and nuts etc are the building blocks of your body - not carbohydrates like bread and pasta and pastries.

3) That your liver / gall bladder / gastro-intestinal tract may be overloaded with toxins - chemicals - heavy metals - parasites - yeasts and bad bacteria (the unhealthy type that thrive in oxygen starved overly acidic environments) - these organisms get "on top" of the immune system mainly due to the presence of heavy metals like mercury from amalgam fillings and mercury and aluminium from inoculations.

PLEASE be aware that I was chronic for 15 years and that the list of supplements is long because of that - your supplementation levels will be determined be tests and may be a fraction of the list below.

The first important thing you must do is:

1) Identify through tests if you have mercury or other heavy metals - remembering that they may not initially show up until you start actually detoxing or taking vitamins and minerals which toxins will then bind to and allow then to finally start getting transported out of the body through the usual channels, urine, stool, sweat. I would go on a low carb diet for 6-8 weeks first so that toxins can start being burnt off from within the fat cells - this will allow them to start showing up in the hair, blood or urine.

Your test results will determine which vitamin and supplements you may need.

(IBS sufferers have intestinal issues with pathogens like bad bacteria, parasites and candida yeast possibly caused by heavy metal and chemical toxicity – this can certainly be the case if the condition is long term and proved hard to eradicate).

2) As far as pathogen organisms there are test by companies like Great Smokies and York Nutritional Labs which are covered in Part 3 of the ebook. You can send off for a test kit and post the samples back to them or you can see a nutritionist - advisable - and get tests done with them.

3) If you tests show heavy metals then you will need to start redressing the imbalance in your Essential Fatty Acids through the taking Phosphatidyl Choline and BodyBio Balance Oil and Evening Primrose Oil. Changing the lipid balance of the bodies cell walls
will facilitate the cells detoxing ability. By taking Pure Body oral drops or the Extra Strength spray, which is 200 times stronger - you can start detoxing metals with this regardless whether fillings are in or out unlike the cilantro drops - - - fillings do HAVE to be removed though. 

http://www.heavymetalsdetox.mytouchstoneessentials.com/pure-body-extra-strength

4) I would ease into the low carb/low glycemic index diet over a one to two week period. Please see: http://www.thiscureworks.com Remember when coming off the diet to introduce ONE CARB A DAY so as to avoid stomach upsets.

5) I would get prepared to do the phos chol liver flushes (20 phos chol for two consecutive nights with ox bile for digestion of fats) and coffee enemas - which involves 6 capsules of Butyrate 2x daily for a minimum of 2 weeks before doing them. Also use 2 tablespoons of BodyBio Balance oil 2x daily and 4-6 capsules of Evening Primrose Oil and a couple of peppermint gel capsules a day for 2 weeks. I would do the other vitamins and supplements at the same time.

It’s a lot so re: cost etc, I would say the most important apart from the above is:-

1 tablespoon of Phosphatidyl Choline liquid (Bodybio PC) this makes up 50% of the bi-lipid layer/wall of every cell in your body)

E-lyte or Klinghardt Academy Chlorella - vital to absorb the toxins. The chlorella pyrenoidosa is more absorbent than the chlorella vulgaris. You may need a few digestive enzymes.

A good multi vitamin high in magnesium so you get 500mg a day -- great for clearing toxicity.

Also Essential:-- (and in order of importance).

High Essential Fatty Acids (Omega 3 and 6-excellent research results on their effects - This is the BodyBio Balance Oil) and supplements like Klinghardt Academy who do veggie pearls high in omega 3 fats, and foods like flax seeds, avocados, cold pressed olive oil, coconut oil - great to cook in, quality nuts -- not peanuts they're too high in carb as are a cashews and impair liver functioning.

1 tbsp of Evening Primrose Oil.

Vitamin C as sodium ascorbate -- this is good for adrenal stress as well.

Digestive enzymes -- Incl. a digestive enzyme and ox bile salt to help fat digestion if necessary.

You could take a Protein/BodyBio Balance Oil shake - see below section on omega 3 and 6. Shake in between meals (you can do 2 shakes a day) using: Vitol egg powder protein or Vianesse body shape (from Holland) - 2 scoops and /or 1 or 2 raw eggs yolk. The shake will help with tissue repair and flush the liver and gall bladder and the fats will help synthesis hormones which equals more energy, calmer thinking, less stress, better sleep. A multi B vitamin complex also may be necessary.

For flavour use some xylitol sugar from Higher Nature or Stevia and/or cocoa powder.

2 tbsp of Bodybio Balance Oil (omega 6 and omega 3 oil in the right ratio as compared to commercial fats where it is 24:1)
Electrolyte minerals -- remember the chicken cells kept alive for 28 years in the right balance of extra cellular fluid! Also see www.quench.ca -- they have a multi mineral in distilled water.

Liquid Minerals (important) they do a multi mineral bottle so you don't need all the separate ones shown on the BodyBio web site.

Ionic silver -- kills 650 types of anaerobic bacteria - the nasty ones that proliferate in oxygen starved environments usually where metals reside -- or Miracle Mineral Supplement, another good anti-bacterial/parasitic.

Mastica gum kills bad bacteria - including the ones that cause ulcers and irritation to the G.I. tract.

Candizyme - breaks down the candida yeast cell wall.

Freeze dried garlic -- deeply cleansing and helps to remove mucous in the G.I. tract produced as a result of immune system reaction to toxins in the tract which therefore interferes with absorption of food.

Take sodium bicarbonate - one tsp in water with a tsp of black sugar molasses - morning and night for 14 days and then stop for 1 week and repeat. This will help kill pathogens like yeasts and is also good for unsettled stomachs and gas.

The nutritionist I saw, Hazel, was using Detoxamin but it can be quite draining as I found out even at low doses. It is an EDTA suppository and you have to make sure your mineral base is well established before and during the use of such chelators. Please consult with a professional healthcare specialist for this product to make sure the liver and kidneys are stronger enough to undergo a metal detox.

Hazel has now started to use Pure Body Extra Strength as it is very effective at removing chemicals (like VOC's) and heavy metals but without stripping out good nutrients. http://www.heavymetalsdetox.mytouchstoneessentials.com/pure-body-extra-strength/

Remember I had long term chronic fatigue so I pretty much did everything at once. Again, you may only need to do a fraction of these supplements depending on your hair mineral analysis.

**Low Cost Detox Options**
Although the list is comprehensive there are certainly many things that you can do that are not that expensive.

Take sodium bicarbonate - one tsp in water with a tsp of black sugar molasses - morning and evening for 14 days and then stop for 1 week and repeat. This will help kill pathogens like yeasts.

Consider Miracle Mineral Supplement detox capsules. This will help kill pathogens like yeasts.

Change the diet to low carb as recommended to produce more glutathione. See recipe ebook link above in point 4.
Take Vianesse Body Shape protein shakes from Holland - two scoops twice a day between meals.

Take probiotics. Also good for gastric cramping and/or an upset stomach.
Take regular saunas.

Increase omega 3 & 6 oils in the diet—the research on its effects are beyond doubt. Do the Lymphatic drainage massage daily.

Take a good quality multi vitamin high in magnesium to aid detoxing the cells, along with liquid minerals and take vit c.

Do liver flushes (again under the supervision of a nutritionist—which I recommend you should factor in the cost of, as well as medical tests).

Do just coffee enemas with butyrate.

Buy the ionic silver which knocks out 650 different types of bacteria, yeasts and parasites—again it’s not that expensive.

And if you can afford it take the PCA-Rx or ES oral spray for metal detoxing.

Use Detoxamin – see link above -- please consult with a professional healthcare specialist for this product to make sure the liver and kidneys are stronger enough to undergo a metal detox. Think of detoxing heavy metals as training and then running a marathon. First get your body "into training” by getting your vitamin/mineral levels established, and if necessary using kidney and liver support herbs, then you are ready to do the “marathon” i.e. detox heavy metals.

Grow your own wheatgrass and use the juice in an enema for 15 minutes or as a drink—go slowly with quantity as it can make you nauseas.

**In summary then the detox consists of:**

A low carb diet, supplements, and liver/gall bladder flushes -- it may make sense to hold off on probiotic floods until you have done a couple of months of metal detoxing.

It took me 2 years before my lead and mercury levels stopped showing on Hazels tests. I also retested years later with a hair test and saw traces of lead, which shows you the challenge faced when eliminating heavy metals! I did the diet strictly for the first 4-5 months and then eased off, reintroducing carbs, whilst continuing on a maintenance level of supplementation including good fats, Magnesium Formula 1 multi vitamin, B complex and Butyrate and coffee enemas.

**Note:** Do keep a check on your vitamin and mineral status at least twice a year as I discovered the Butyrate (high in calcium) had increased my calcium/magnesium ratio (this can also show poor utilisation of magnesium) – this was remedied by increasing magnesium and cutting back on the daily intake of Butyrate.
SECTION 6: FREQUENTLY ASKED QUESTIONS

**QUESTION:** How much will all the supplements cost me?
**ANSWER:** I took the detox supplements for about four months and am still taking some of them. I have always taken vitamins on and off since 1989, so it can be expensive. Most items range from around £10 to £30. The most expensive item is the Phos Chol in the US. This is $138 for 300 capsules, and in the UK it works out at £165 for 300, so it’s cheaper to order direct from BodyBio in the US. You will need to order approximately 4-5 bottles of Phos Chol, depending on the frequency of your liver flushes.

*****

**QUESTION:** Why is Phos Chol listed as an optional supplement in the Patient Detoxx™ Book, when it is essential to repair the cell membrane and necessary for the detox liver flushes?
**ANSWER:** I believe the creators of the detox realised that the expense might put people off. The no-carbohydrate diet is critical to the success of the detox, as is the Phos Chol for cell membrane repair.

*****

**QUESTION:** I don't like the idea of doing the enemas: can I do colonic irrigation instead?
**ANSWER:** No, the coffee enemas help to stimulate the gall-bladder and make the bile more fluid and less sticky. Use room-temperature filtered water.

*****

**QUESTION:** My stomach is upset doing this detox. Why?
**NOTE for IBS sufferers:** It could be that you’re possibly taking too much Vitamin C, too much yoghurt or olive oil. Some IBS sufferers have problems with fructo-oligosaccharides in the Flora Synergy probiotic. I suggest changing to something like Bio-Kult from the NutriCentre in London or Saccharomyces Boulardii. Talk (free of charge) to the pharmacist. Also, as the metals and toxins are released from the GI tract, they have a dampening/inhibiting affect upon yeast and bad bacteria, which become temporarily active and flare up.

*****

**QUESTION:** They mention pure water in the detox book? What’s the best water to use?
**ANSWER:** Bottled mineral water or filtered tap water is fine.

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**QUESTION:** Why do I have tinnitus (ringing in my ears)?
**ANSWER:** This can be a symptom of heavy metal toxicity

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**QUESTION:** Is it safe to use Stevia sweetener?
**ANSWER:** Yes, the FDA has not banned this substance. If you go to a restaurant in Japan, you’ll find salt, pepper, and Stevia on the table

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**QUESTION:** Why is it that I can’t get rid of candida when I have mercury in my system?
**ANSWER:** The metals can accumulate in the fat cells of your villi (the short finger-like membranes) of the mucous membrane of the intestine. The metal causes your body to
produce more mucus as a protection mechanism. This mucus creates the anaerobic (oxygen-deprived) environment ideal for fungus to thrive.

*****
**QUESTION:** I heard that sugar is only broken down and absorbed in the small gut, so how can it feed candida in the large bowel?
**ANSWER:** Candida Albicans can get out of control easily and can reside in many different areas of the body, including the large intestine.

*****
**QUESTION:** Is it safe to be eating more meat?
**ANSWER:** It is true, red meat contains saturated fats. However, remember the Inuits! Low carbohydrate diets do not cause increased cholesterol from saturated fats because of the reduced insulin levels and its effect upon fat synthesis. Also, there are white meats, chicken and fish, and this diet is only to be followed for a short period of time – a couple of months. More traditional carbohydrates are reintroduced. (No more than one portion a day – DO IT GRADUALLY.) For those uncomfortable with this, there are alternatives source of proteins such as eggs, cheese and tofu.

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**QUESTION:** Are cashew nuts all right to eat on this diet?
**ANSWER:** No, if you look at the quantity of proteins listed on the packet and compare that to amounts of carbohydrate, you will see that they are nearly even. You should eat nuts that have low carbohydrate to protein ratios, such as pine nuts, brazil nuts, almonds, walnuts and pumpkin and sunflower seeds...

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**QUESTION:** The detox book advises against eating margarine but then says it’s all right to eat Flora sunflower oil? That’s a supermarket brand?
**ANSWER:** The Flora they refer to in the detox book is an American brand. If you live in another country, a good health food shop will have palm or coconut oil (or from Higher Nature) which is free of chemicals. Don’t use supermarket oils unless you are confident of the source and quality of the oils.

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**QUESTION:** I live in the UK. Do I have to order the egg protein powder from the Netherlands (Holland) or can I get it here? How do I order it?
**ANSWER:** You can buy BodyShape protein powder (available in Vanilla or Chocolate flavour) from Vianesse in Holland (the country) by emailing them at vianesse@gmx.de or calling them on 0049 (0)5149 92211. You can also purchase a egg protein shake at a health shop such as Holland and Barrett in the UK. You can also get soy protein powders with no carbohydrate content from health food shops, which are good for maintaining weight. Watch out for hidden sugars.

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**QUESTION:** The candida seems to be getting worse: I’m more bloated – why?
**ANSWER:** As the metals are removed, there can be a tendency for this to happen. The candida binds with heavy metals and it’s the metals that actually inactivate the candida to some degree. When the metals then bind with the chlorella and cilantro and start to be removed, passing through the system (GI tract/liver and gall-bladder, etc.), the candida can ‘flare up’ and multiply. That is why it is necessary to take the freeze-dried garlic to kill it off.

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**QUESTION:** I haven’t experienced any adverse reactions, as I was expecting? Does this mean the detox is not working?
**ANSWER:** You are fortunate. Some people have painful detoxing experiences – that is why I *always* advise that you should be doing this detox in conjunction with a healthcare practitioner. You will find that by having tests done at the beginning of the process that you can compare these results to results produced later (1-2 months’ time).

Positive results have been quicker in those people who were able to have **glutathione and phosphatidylcholine IV pushes (injections)**. In fact, Patricia Kane of BodyBio has said that taking 20 Phos Chol every night has a similar effect – but of course this is dependent upon your own strength and should **NOT** be considered without medical guidance and support of the kidneys and adrenals with an adrenal support formula such as Adrenal Force by Energetix. **Use with professional guidance.**

If your energy is good, to move things along you can try increasing the chlorella from 12 to 24 at night (you might need to take digestive enzymes with this dose) and 12 half an hour before breakfast and 12 before dinner. Do this for ONE week. Also take 2 drops of cilantro with each meal, building up to 10 drops over a few days. After one week, go back to 12 chlorella at night and 6 at breakfast and 6 at dinner. Continue with this for **two to three** weeks and then repeat the cycle.

Chlorella Pyrenoidosa is more absorbent than Chlorella Vulgaris. N.B. It is possible to take up to 40 chlorella four times per day. Healing crisis are **aided** by increasing not reducing supplements such as chlorella and butyrate, as they help to ‘mop up’ toxins being released. Those with suspected leaky gut syndrome from intestinal candida might want to try flooding. Take 6 Galt Immune capsules morning, noon and night along with 6 Flora Synergy capsules (Flora Synergy 20 minutes before food). Do this for three days. Then continue by taking 3 times 2 per day of the Galt Immune and the same for the Flora Synergy.

**QUESTION:** If my mercury fillings aren’t leaking, why do I need to have them out?
**ANSWER:** All mercury fillings experience some erosion and evaporation. The brain is 60% lipid. (Nerve cells are made up of lipids.) This is where most of the mercury gets situated. Taking Cilantro **IS NOT ADVISED** while fillings are still in.

**QUESTION:** Are swedes all right to eat?
**ANSWER:** Yes, they’re low glycaemic index and therefore produce a low insulin response.

**QUESTION:** Why is it so important to keep insulin down?
**ANSWER:** Mainly because lower insulin promotes increased activity of the enzyme glutathione in the liver. This enzyme helps in detoxifying heavy metals.

**QUESTION:** I’m concerned that I can’t seem to source a cheap source of pure fish oils. I know small fish such as sardines are the safest` but what else can I take?
**ANSWER:** [http://www.klinghardtacademy.com](http://www.klinghardtacademy.com) sells fish oils/omega-3 as ‘Veggie Pearls’. If you are not vegetarian, these are also available in gelatine capsules, which also makes them cheaper.

**QUESTION:** What is wrong with traditional chelating agents such as DMPS to get rid of metal toxins?
**ANSWER:** There is concern that as the metal ions are being excreted through the normal channels that there is re-absorption of metal ions, particularly in the bowel. Chlorella is essential to mop up this effect.
I have also become aware of a company called Touchstone Essentials: [http://www.heavymetalsdetox.mytouchstoneessentials.com/pure-body-extra-strength/](http://www.heavymetalsdetox.mytouchstoneessentials.com/pure-body-extra-strength/) that has overcome this problem with a product called Pure Body Extra Strength. This product bonds stably with metals and toxins and safely removes them while not allowing for any reabsorption. **THIS PRODUCT IS STRONGLY RECOMMENDED** in conjunction with the procedures described above and may, in fact, result in an even QUICKER detox period. It can also be taken before amalgam fillings are removed.

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**QUESTION:** I am having sleeping difficulties and can’t get to sleep. On the nights I do I wake up either in the middle of the night or too early.  

**ANSWER:** This could be due a number of factors including magnesium and/or iron deficiency, stress, irregular times that you are going to bed. Try using a breathing and visualisation exercise and going to bed at the same time.

Other possible culprits include, lack of exercise, eating too late – you should not eat or drink 3 hours before bed, spicy foods, caffeine, noise, temperature and electromagnetic radiation from wireless devices. Switch off all devices at bed time. Do not sleep within 1 metre of a wall plug/socket as they emit electromagnetic fields that can effect some people.

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**QUESTION:** This no-carbohydrate diet is impossible to do! I have a sweet tooth and find it difficult to stop eating these foods.  

**ANSWER:** You need to be prepared before you start the diet so that you have healthy alternative snacks ready to eat; I only used *The Patient Detoxx™ Book* recipes for the omelette recipe. There were just too many food products to source and order for each recipe. To this end and after repeated requests I have produced a *recipe ebook* with delicious recipes that are easy to source and quick to make. It may be possible for some people to simply follow the diet and eliminate their health issues. The deciding factor will be the level of toxicity. As a special courtesy it is at a reduced price to all my readers. Please visit: [http://www.thiscureworks.com/ibsrecipes](http://www.thiscureworks.com/ibsrecipes)

I also recommend buying natural xylitol sugar substitute and/or occasionally taking carb/starch neutralisers like Freecarb which are taken before eating carbohydrates. An amazing thing about altering your diet is that after you stop detoxing, which **typically continues for a minimum of three months**, and you start to introduce carbohydrates SLOWLY again (ONE a day; grains are probably best avoided as they contain microbes and also result in a gluey film lining the GI tract, inhibiting digestion and toxin release), **you won’t have those cravings any more.** Your blood sugars will be balanced during the day, you won’t have food allergies or intolerances or parasites, all of which can create food cravings. Also think of all the years of GREAT HEALTH you have AHEAD of you, as motivation.

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Any further queries not answered here please consult with your nutritionist or healthcare advisor.