

# NUTRIGOLD Education News

Detoxification Issue I



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Dear Reader,

Well it's that time of year again where we start to think about how we are going to live up to our bold New Year resolutions. One of the favoured approaches seems to be to turn to the idea of a "Detox", it sounds great but what is a Detox?

Is a Detox just a vague term used to describe a regime where we eat less or more of the healthy foods or is it a real cellular process that takes place in our body? Every year you see the

journalists in the media send out such mixed messages. One moment a "Detox" is the answer to all our prayers the next they are suggesting you are better off having a glass of tap water. The health food shops often seem to be bulging with cheap nutritional products that claim to give you a good Detox for a couple of pounds, can this really be true?

Well to help you get a better idea of what a truly naturopathic cellular detoxification process is and the results you can expect from such a detoxification The Nutrigold Technical Team have laid out what we would consider to be the main points of an effective, traditional naturopathic detoxification regime. Should you or your family and friends decide to undertake such a detoxification regime, I hope you not only enjoy the process of ridding the body of unwanted toxins but that you also go on to enjoy enhanced health, energy, wellbeing and creativity for many years to come. ■

## What is Detoxification?

Detoxification techniques are not just about lifestyle choices, but are in fact a vital part of the naturopathic nutritionist's armoury of treatments. Detoxification is a natural physiological process used to rid the body of unwanted chemicals which are capable of harming the body. Such chemicals include those produced by the body's own metabolic processes and those we are exposed to in our environment (plastics, metals, pesticides, and fumes). The body has a sophisticated system of circulating fluids to pick up and

transport toxins, and organs to neutralise and excrete them from the body, including the liver, kidneys, and skin.

The modern environment and lifestyle adds additional burdens to the body and its natural processes of detoxification can be overwhelmed. Such congestion and dysfunction may be a key barrier to health. As naturopathic nutrition aims to encourage the body to function as well as possible – to self-heal – assisting detoxification is a key therapeutic aim. ■

## So what do we mean by a Naturopathic Detoxification?

A popular lifestyle choice, especially after a period of overindulgence, is the famous 'detox diet', popularised by newspaper health columns and magazines.

Many may choose to 'detox' principally to help lose weight, adopting radical short term dietary regimes. Such diets may certainly help, but this approach to detoxification is superficial and belies its power and depth as a rejuvenating and healing technique. In fact detoxification can be promoted at many levels and in many body systems releasing the body's natural energy, power of self-healing, and freeing the mind and spirit.

Anyone can benefit from detoxification, from individuals with poor lifestyle and resulting sluggishness of all systems, through to those who follow healthy regimes but who want to specifically intensify their body's natural mechanisms and achieve even greater health. There is no one single method of 'detox' – detoxification is about making personal choices of how widely and deeply you wish to cleanse, over what period of time, and which tools you choose to support you. We hope this guide will help you with the choices available if you intend to cleanse your body and mind. ■



## Symptoms of Toxicity

These are wide ranging, affecting all systems.

The individual manifestation of toxicity is dependent on the person's inherent weaknesses i.e. for one person the focus may be the skin, for another the muscles and nervous system.

General symptoms include tiredness, fluid retention, PMT, regular infections, allergies, fluctuating weight, low sex drive, and difficulties conceiving. Digestive symptoms include indigestion, heartburn, cravings, loss of appetite, nausea, bloating, flatulence, diarrhoea, constipation, haemorrhoids, halitosis, and coated tongue. Symptoms may manifest in the skin as flushing, acne, boils, sweating, dry itchy skin, cellulite, and puffy

eyes with dark circles. Excess waste substances can result in frequent urination, excess mucus, and sinus congestion. There may also be muscular: cramps/aches, joint inflammation, respiratory infections, palpitations, rapid pulse poor circulation, raised blood fats and nervous problems such as pins and needles, dizziness, faintness, insomnia, and headaches. ■

# Cellular Toxicity

Toxicity occurs at multiple levels, levels which ordinarily would operate as channels for ridding the body of unwanted substances.

The most fundamental level is the cellular level. Cells are the powerhouses of the body's many complex functions and need to have an appropriate flow of nutrients in and waste out. An example of toxins directly affecting cellular function occurs when heavy metals such as mercury is utilised in enzymes in place of zinc, because of the minerals' structural similarity. Cells also need to exist in correct pH conditions to ensure optimum function. To maintain

cellular health and responsiveness, sodium and potassium levels should be balanced with a low level of sodium inside the cell, as sodium is the main electrolyte substance outside of the cell and potassium the main one inside the cell. This creates a 'dynamic tension' which enables the cell to function properly in response to a stimulus. An incorrect balance of either substance will affect cellular functioning throughout the body, resulting in a range of symptoms. The 'sodium-potassium pump' maintains balance by moving either substance in/out of cells. This process is dependent upon ATP (the key energy molecule which the cells utilise) and magnesium. Either a magnesium

deficiency or continued activity using up ATP will gradually cause the pump to fail. This results in imbalance and general tiredness through the day. ■



## The Lymphatic System

The lymphatic system is a secondary circulatory system which works alongside the cardiovascular system. It contains lymphatic fluid which circulates through a network of vessels which run throughout the body. Unlike the cardiovascular system there is no pump like the heart, therefore the lymph circulates with the help of the contraction of the muscles of the body. Like blood vessels, the vessels of the lymphatic system gradually get smaller and smaller until they become lymph capillaries. These capillaries drain the waste material eliminated from the cells. In addition the lymphatic system plays a key role in immunity and helps to transport fat around the body.

## The Lungs and Skin

Lungs and skin are an alternative route to eliminate water soluble toxins. The body may particularly use these routes when the liver and kidneys are struggling.

## The Kidneys

The kidneys are a key outlet for ridding the body of water soluble toxins and a vital mechanism through which sodium or potassium in excess can be excreted out of the body from the bloodstream, helping to maintain balance. The presence of the sodium-potassium pump in the Loop of Henle selectively extracts and replaces sodium or potassium until a balance is achieved. Again, this process depends on magnesium and available energy/oxygen. The sodium-potassium balance can easily be disturbed as a result of our modern lifestyle and diet. The kidneys usually have to work very hard to maintain homeostasis. The modern diet is too complex and often overloaded with sodium. Furthermore general toxicity in the body has to be dealt with by the kidneys as the 'last line of defence' for detoxification and elimination. So the kidneys need to process and excrete a large amount of chemicals to balance the fluids of the blood and therefore cells. Unsurprisingly the kidneys can become overworked and not function as well in this respect.

## The Liver

Transported toxins are usually processed by the liver. This large, vital abdominal organ operates as a chemical factory, breaking down substances via a number of reactions so they can be excreted through the digestive system or the kidneys. The liver's function can be overwhelmed by lifestyle, impaired by congestion due to stagnation of blood or excessive fats and can atrophy with use of alcohol. Supporting the liver is vital to good health.

The liver processes toxins through two phases: Phase 1 involves rendering fat soluble toxins water soluble utilising the activity of P450 enzymes. However the resulting epoxides or hydrogen peroxides are quite toxic in themselves. Phase 2 is then utilised to further neutralise the resulting chemicals using the selenium and sulphur amino dependent glutathione peroxidase. The liver outputs its deconjugated toxins through bile or shunts them through the kidneys. Steroid hormones, excess cholesterol, and pharmaceutical agents are just some of the substances excreted from the liver. ■



# A Plan to Support Detoxification

Detoxification means many things and has a popular image which can be misleading.

In point of fact there is a continuum of detoxification ranging from gentle to more powerful techniques that would need to be matched to the individual's level of need and ability to handle the treatment. It is important that the rate of release of toxins from cells should correspond to their rate of elimination. There are also levels of detoxification that can be stimulated individually or simultaneously including the bowel, the liver, the kidneys, the lymphatic system, skin and cells.

Detoxification can be done intensively and may shock the body into ridding itself of chronic conditions. People often undertake such regimes on retreats. Unsupervised, such rapid and deep cleansing may be dangerous. Deep detoxification should always be undertaken under the guidance of a practitioner. More commonly detoxification is a gentle process undertaken over a longer period of time.

Detoxification should not be undertaken if pregnant, breast feeding, convalescing, or receiving medical treatment (unless the doctor agrees)

Detoxification often results in symptoms worsening before improving. This is a natural 'healing crisis' and can be explained as the

body throwing off that which it has acquired through ill-health. Symptoms may include skin rashes, inflammation, joint and muscle pain.

It is important to remember your body is constantly eliminating toxins and that your body wants to be well; it is its natural state. In this sense prevention is better than cure, and so one of the best ways to detoxify is to prevent toxins getting into the body in the first place. Lifestyle changes are vital. Read food labels, become familiar with food additives, buy organic if possible or even grow your own! Your diet should be unadulterated. In addition:

- Avoid overheated polyunsaturated oils and saturated animal fats.
- Try not to overburden your system with stress, pollution, recreational drugs, over-consumption of alcohol, sugar and junk foods.
- It is worth noting as we get older our body produces fewer enzyme and hydrochloric acid to break down our food. Even incomplete digestion can create toxins.
- It is helpful to start a meal with raw food. Raw foods contain enzymes that help with digestion.
- Certain 'superfoods' eaten long term are known to help the detoxification process. Some of these are seaweeds, miso, mung beans, fresh coriander; buckwheat, pectin

containing foods such as apples, sunflower seeds, chlorophyll rich foods such as cereal grasses spirulina, wild blue green algae.

**A structured Detox regime usually follows the sequence outlined below:**

## Strengthen the digestive system

The bowel is a key outlet of eliminated toxins. Poor digestion results in stagnation and a lack of excretion of toxins. Bad bacteria will proliferate and the resulting and auto-intoxication by fermented foods are passed to the liver; resulting in liver stagnation. Dietary changes such as eliminating stagnating foods like wheat and dairy, increasing fibrous, nutrient rich foods like fruit and vegetables, and using supportive supplements can help.

## Improve elimination through the skin

Skin brushing, saunas and epsom salt baths can promote natural elimination of substances through the skin.

## Improve liver function

Once the channels of elimination have improved, the liver can be gently and directly stimulated to excrete more toxins.

## Improve Cellular detoxification

Finally the cells can be supported to eliminate toxins by use of key minerals, balanced correctly with other nutrients. ■



## Supplements to help

### Aloe juice

Aloe vera has a wide range of pharmacological activity. Aloe vera contains soothing aloin anthroquinines, containing cleansing saponins (soapy substances) and antioxidants which act to cleanse and protect the bowel. Anthroquinines aid absorption from the gut. Studies done in Russia reveal aloe is effective in removing toxicities. The polysaccharides present in aloe helps the cells in the digestive tract to renew themselves. Lignans present in Aloe absorb fluid and toxins and bulk up motions (slight laxative). Aloe also has anti-inflammatory, antiseptic, immune support and wound repairing properties.



### Psyllium Husks/Flaxseeds

Psyllium consists of largely insoluble fibre which adds bulk to stools, aids motility of the gut and lifts impacted matter from the bowel wall. Dry Flaxseeds exhibit similar properties as the lignans and help to bind and export toxins.

### Bentonite Clay

Clay has a long history of use in healing and detoxification circles. Indigenous cultures have used clay for health since before records began. Bentonite clay is a colloidal hydrated silicate clay formed from the weathering of volcanic ash. One way it works is by adhering to toxins in the GI tract and will carry them out of the body. Clay has a negative electrical attraction for particles that are positively charged. Poisonous toxins in the body are positively charged and drawn towards the clay. The minuteness of the particles of bentonite clay give it a large surface enabling it to pick up many times its weight in positively charged particles. Clay works best in small doses.

### Milk Thistle

Silymarin, the active constituent of milk thistle, protects liver cells from toxins. Wipes up free radicals and increases antioxidant enzyme glutathione. It also helps to regenerate important liver cells.

### Lipotropic Substances

Lipotropic substances limit the deposition of fat in the liver and increase its removal. Choline, inositol, methionine and carnitine are all lipotropic substances and can be employed in optimum ratios to enhance appropriate fat metabolism by the liver.

### Magnesium

Correcting any magnesium deficiency through supplementation is also absolutely vital. Magnesium helps the effective working of the sodium / potassium pump in the cells and the kidneys. This often forgotten mineral also acts as a powerful detoxifier which can cause problems if the released toxins are not eliminated efficiently from the body. Modification of the dose or balancing with some calcium can help control its effect where needed.

### Sulphur Amino Acids

Glutathione is composed of the amino acids cysteine, glutamine and glycine and is concentrated in the liver; although it carries out its work throughout the body at cellular level. Glutathione is an antioxidant enzyme with a central role in protecting the body's cells from free radical damage. This important enzyme is involved in protecting cells from environmental toxins, drugs and alcohol as well as toxins produced by the body itself ▶▶

as a result of normal metabolism. Methionine is also a sulphur containing amino acid that is important for detoxification. Cysteine can be synthesized in the body from methionine, so the presence of methionine will support glutathione production. Sulphur amino acids like cysteine are also chelaters, and can bind to heavy metals to aid the removal of them from the body.

#### Equipment to help Skin Brushing

Using a firm natural bristle skin brush, daily brushing in the right way can really help to promote detoxification both by refreshing the skin's ability to excrete toxins, but also by stimulating the flow of lymph under the skin.

#### Juicing

Juicing is a highly beneficial and easy way of helping the body detoxify. Raw vegetables are full of enzymes which help the digestion. They contribute a concentrated supply of phytonutrients that could not be obtained by eating a normal amount of raw vegetables and fruit. A normal diet will cause a build up of acids and metabolic waste products in the body, which can result in inflammation. This acidic state of the system can be neutralised by drinking raw juices. Celery, cucumber and cabbage are excellent to reduce acidity.

Raw juices also stimulate the function of the bowels, liver and kidneys, which will increase the breakdown and elimination of toxic chemicals and waste products from the body. Raw juices can increase the quality and flow of bile. Juicing can be directed at specific problems such as liver and kidney 'detox', arthritis, gout, re-mineralisation, urinary cleansing, and weight loss.



A tasty and simple liver 'detox' juice is a mix of beetroot, carrot, ginger and apple. Ginger helps to inhibit blood clots and the formation of LDL cholesterol. Beetroot cleanses the liver, biliary system, and gallbladder and may help unblock the arteries. Carrots are a liver cleanser and a tonic. Apples contain the powerful antioxidants phylorizine and ursolic acid which have an anti-inflammatory effect in the system. It is advisable to put psyllium in the juice to bulk out the intestines and also give a feeling of fullness.

#### Epsom Salts Baths

Epsom salt is magnesium sulphate. Sulphates process toxins helping them to leave the body. Magnesium sulphate is used in this way to help the body 'detox' by eliminating toxins at a cellular level by sweating. Epsom salts baths can be used following a period of emotional or physical overstress. They work as a nerve relaxant and can also be helpful for jet lag. It is advisable to only have 2-3 epsom salt baths a week and not more than 2-3 weeks running. Make sure you drink plenty of water while taking the baths. Epsom salts baths are not advisable for people with high blood pressure, heart problems or diabetics.

#### Castor Oil Packs

External use of castor oil can be highly effective for constipation and elimination and to encourage lymphatic circulation. Both are helpful in regulating and detoxifying the body. ■

**Detoxification is a vital process for people in all walks of life. With a little commitment, much can be done using simple diet and lifestyle changes and the process can be made more specific and intensified with the use of supplements to support the diet.**

Once a state of health has been achieved, continual sensible and achievable lifestyle and dietary modifications, together with maintenance nutrition to support the vital processes (cells, lymph, liver, kidneys, bowel), can result in remarkable long term changes in health and vitality.

Should you want to know more about the complexed issue of exactly which nutrients are indicated to support the liver and kidney detoxification processes and why please take a closer look at the enclosed newsletter by Dr L.G.Plaskett B.A. Ph.D., C.Chem entitled "The wherewithal to detoxify". When evaluating what you would like to try, do please remember that a detoxification regime doesn't have to be an all or nothing process, you can add any part of the suggested regime that suits your lifestyle without having to do the whole more intense process. It just won't tend to be as effective as a complete cellular detoxification regime. You could for example decide to simply add some Milk Thistle (silymarin) to your regime to support your liver function. ■

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Should you want to know more about the more complexed issue of exactly which nutrients are indicated to support the liver and kidney detoxification processes please feel free to download a free copy of Dr Lawrence Plaskett's B.A. Ph.D., C.Chem wonderful scientifically referenced newsletters:

- **The Wherewithal to Detoxify**
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