Mercury (and Manganese) are the poisons now that Lead was, that ruined the Roman Empire.

Mercury and Manganese are major toxins that parts of the world are suffering. In 2009, USA measured the Hg levels in all their 300 rivers and found that Hg was above the acceptable level for human consumption in all of them, from dumped computers, batteries, circuit boards, cell phones, fluorescent lamps, thermometers, etc., and from burning a lot of coal and oil.

Mercury is a a liquid elemental metal, in its natural form. Historically mercury was called quicksilver. It is the third most toxic substance known to man. It is the most toxic non-radioactive metal that can poison brains, central nervous systems, kidneys, and whole bodies, even in extremely low concentrations.

A most knowlegable USA doctor, Dr Joseph Mercola (please get his newsletter), believes Hg falls into USA's soils from coal burning power stations, and he warns people that some companies try to hide Hg content in supplements and call it Protomer. Some companies add heavy metals to simple supplements like magnesium sulphate and call it 'chelated' so they can patent and/or copyright it. I avoid taking all chelated supplements and ones containing the word 'chelated'. Read about 'Chelation' in Health Human Minerals.

Some company labels state "Tested for mercury", which is meaningless, as far as quantity of Hg is concerned. All labels from good companies should have, "Contains no mercury, cadmium, lead, etc." Manganese is very low in USA, so they thought that 1 to 3 ppm was necessary in their food. I told many there and all redears of my web site, that it was too high, and in late 2015 they found that many were suffering from excess Mn as is occurring in New Zealand people and animals. They then reduced their recommendation to 1 to 2 ppm. Mine is to not exceed 1 ppm. Ppm is a silly measuring system, because 1 ppm in a supplement pill could be OK, but in drinking water is too much.

Mercury toxicity can lead to major inflammation and chronic illnesses. It is a main cause of cancer.

People are dying younger because of mercury increasing in brains from medical treatments, pain killers, vaccines, soils, waters, flu shots given to children and adults, etc.

These changes were seen in 21 countries, but the United States fared the worst by far. In the United States, neurological deaths in men older than 74 tripled from 1989 to 2010, and they increased nearly fivefold in women of the same age. More elderly USA women are now dying from brain diseases than from cancer for the first time in recorded history.

In a study published in the Journal of Alzheimer's Disease in 2010, researchers reviewed 100 prior experimental and clinical studies looking at the effects of mercury on cells, animals and humans. They found that long-term mercury exposure produced many of the same changes seen in Alzheimer's disease, including confusion and impairments to memory and cognitive function, to cause 'stupidity', I apologise to use this word, because it is not their fault, unless they refuse to remove toxins like amalgam from teeth, and other polutions, while saine.

Researchers compared the rates of neurological brain diseases in 21 Western countries from 1989 to 2010. They found that in 2010, the average rate of onset for dementia was 10 years earlier than it was in 1989. Deaths from neurological disease had increased significantly in people aged 55 to 74 and had nearly doubled in people aged 75 and older.

Mercury has been described as has no useful purpose and is bad for all people and animals to varying degrees (small amounts kill dogs). Look at what amalgam teeth fillings of silver, bound with mercury, has done to so many.

If possible, avoid all chelated (means mixed and glued with mercury) supplements, for humans and animals. Mercury is a poison with absolutely no benefits for anyone or anything. It gave me boils and pimples, bad rough skin, rosacea on my nose and ill health. Read Amalgam and Mercury and other toxins in Health Human Minerals. After I had all amalgam removed two decades ago, all those problems dissappeared, but returned after taking the new pain killers Paracetamol, Panadine and Panadol are very effective, but after suffering mercury toxin symptoms I analysed them and found they contain about 20 ppm of mercury, a major toxin causing Autism, Attention Deficit (AD) in children of pregnant mothers who took these pain killers. Mercury causes sore joints, pimples, boils and things caused by amalgam in teeth. Lead and cadmium also cause AD in children.

- Mining: In early times, Spanish criminals sent to the mercury mines, died in about three years.
- Releasing mercury during production: Mercury is released into the environment when amalgam is

manufactured.

- Endangering dental professionals: Dentists, dental hygienists, dental assistants, and dental office staff are exposed to mercury during and after amalgam preparation.
- Deceiving dental patients: Most dental patients are not informed that amalgam is 50 percent or more mercury many are told that amalgams are "silver fillings."

Pains tell you to stop doing something, so I'm against pain killers. When I had shingles with BAD pains, I stopped using pain killers because their side effects were worse.

Lead and cadmium also cause attention deficit disorders in children.

Pains tell you to stop doing something, so I'm against pain killers. When I had shingles with BAD pains, I stopped using pain killers because their side effects were worse.

Mercury today is the lead of the Roman Empire which affected peoples' brains after they pioneered the use of lead water pipes. It can cause harmful effects before symptoms develop. It is important to contact your doctor right away if you think you have been exposed to mercury, regardless of your symptoms. When symptoms do develop, they may include -

Redness of the extremities, finger tips, chest, and nose (dusky pink hands and feet)

Peeling of skin off the hands and feet

Painful extremities

Tremors

Changes in vision or hearing

Insomnia

Weakness

Headache

Nausea, vomiting, or Diarrhoea

A persistently sore throat

Rapid heart beat

Excessive perspiration

Eye irritation

Irritability

Breathing problems

Painful mouth

Night sweats

Dry, thin, wiry, dull hair

Abdominal pain

Leaky gut

Fever and/or chills

Difficulty concentrating

Weak, flaky nails that split and tear easily

Poor night vision

Poor colour vision

Problems or symptoms that a physician might diagnose, but could be symptoms of Hg poisoning - alphabetically.

- · Addison's disease
- Allergies
- Alzheimer's' disease
- Amylotrophic lateral sclerosis
- Anaemia
- Ankylosing spondylitis
- · Anorexia nervosa
- Anxiety
- Asthma
- Attention deficit hyperactivity disorder
- Autism
- Autoimmune disease
- Bipolar disorder

- Bulging eyes
- Birth defects because mercury can pass into the foetus and brain. A sheep study documented that the fetus accumulates mercury from the mother!
- Bleeding and ulceration of your gums and tongue
- Boils and pimples often brought on by eating chocolate or secondary toxins
- Borderline personality disorder
- Brain and learning
- Bulimia
- Candidiasis
- Central Nervous System Disorders
- Chronic fatigue
- Colitis
- Co-ordination failure
- Crohn's disease
- Dyslexia
- Difficulty focussing
- Endocrine disorders
- Environmental illness
- Fibromyalgia
- Finger tips pink
- Food allergies
- Forgetfulness
- Hypogonadism
- Hypertension (high blood pressure)
- Hypothyroidism
- Infertility
- Insomnia or sleep disorders
- Irritable bowel syndrome
- Itching, burning or skin pain
- Joint and back pains and problems
- Juvenile arthritis
- Kidney dysfunction, e.g., Fanconi syndrome
- Learning disabilities
- Lung damage
- Lupus erythematosis
- Musculoskeletal system
- Manic depression
- Memory impairment
- Mood swings
- Mild diarrhoea
- Multiple chemical sensitivities
- Multiple Sclerosis (MS)
- Myasthenia gravis
- Obsessive-compulsive disorder
- Panic attacks
- Peripheral nervous system symptoms
- Paraesthesia (a tingling sensation on the skin)
- Parkinson's disease
- Pervasive developmental disorder
- Psychosis
- Rheumatoid arthritis
- Saliva excess
- Sensory impairment of vision, hearing or speech
- Schizophrenia
- Sciatica

• Skin shedding, discolouration - pink nose, cheeks, fingertips and toes

!10 of 21

- Stress
- Sweating profusely
- Tiredness faster than normal heart beat
- Virus
- Vision blurred
- Yeast syndrome

There are far better alternatives to amalgam

This is a neurological disorder which causes discomfort in the legs, especially when lying down or at rest. The sensation is described as burning or a creeping sensation which can be mild or quite severe. There is a strong urge to move the legs or get out of bed to relieve the symptoms. Frequently the symptoms varies in severity and can occur once a week or nightly with multiple episodes throughout the evening.

It is estimated at least 12 million Americans have restless leg syndrome. It more commonly affects middle age to older people although it can affect people at any age. More than 80 percent of people with restless leg syndrome also experience a condition known as periodic limb disorder where jerking involuntary motions of the leg occur during sleep.

The cause of restless leg syndrome is medically unknown. There is a 50 percent family history of the condition. Certain conditions such as anaemia, kidney disease and diabetes can cause or exasperate restless leg syndrome. Certain medications are thought to be implicated in this condition. Nerve conduction studies and Doppler sonography should be performed to evaluate and rule out damage to the nerves and vascular flow. If these tests are negative restless leg syndrome may be diagnosed.

The traditional approach to treatment consists of medications which may or may not work for sufferers. Any long term treatment with medication should be carefully thought through since the toxicity of the medication can lead to other serious health problems. The avoidance of alcohol, tobacco and caffeine is another medical suggestion that sometimes is helpful.

There are various substances that can be toxic and trigger the symptoms of restless leg syndrome. People with restless leg syndrome react to various foods, preservatives, impurities and toxins in their legs or thigh – just as people with irritable bowel syndrome react to these same substances in their colon. It can be a metal such as mercury, cadmium, lead or any other heavy metal. It can be sensitivity to wheat, nitrates, sulphites, caffeine, cocoa, artificial sweeteners, hydrogenated oils, preservatives, or any other impurity. Each area of the body has its ability to detoxify toxins.

Identification of the offending substances is the key to successfully managing this condition. Certain food items may need to be removed from the diet or it is frequently possible to desensitize you to a food item that your body proves to be reactive to. It is also important to improve the ability of the lower extremity to detoxify more efficiently. This will eventually allow for casual exposure to toxins to be better tolerated. Detoxification issues can be genetic in nature which can be handled with proper nutritional remedies or even from exposure to a pathogen which can hamper the cells ability to detoxify.

It is imperative to be tested by the likes of Chis Rhodes (See Human Health Specialists) to see what is toxic to you.

About 10 percent of the US population—including many children, pregnant women, and women of childbearing age, in particular—have mercury levels above the levels currently recommended for foetal and child health.

Macadamia trees take up Hg so their nuts are toxically high. One nut can kill a dog.

Interesting about Macadamias being high in Hg. We were told about a correlation between Macadamia nuts and breast cancer at a seminar I attended. The lecturer thought it was the kind of oil found in the nut, but it could have been from the high Hg.

Brazil Nuts contain selenium to assist with mercury detox. The Brazil Nuts we have had tested all contained lead.

Her information was very useful because I believe mercury is affecting the brains of many people in many countries which in turn causes them to make wrong decisions. We are seeing this in leaders,

politicians and local body councillors, all over the world. Excess Manganese accentuates the wrong decision problems. Read Manganese.

I believe it is so serious that it is on a par with the fall of the Roman Empire is badly polluted, and has now banned thermometers, barometers and all items containing mercury.

After Norway, Japan is shockingly polluted, as Sally Mathrick says, some from eating dolphins which she quoted in 2008 as containing 2,000 ppm (when current accepted levels were 0.4 ppm).

America found in 2011 that all their 300 rivers are polluted with mercury, and I suspect most American human brains are - as in New Zealand, form the figures I've see.

Drain your mercury out - not using chelated products, as mercury is used to chelated some supplements, but with Heel products available in many countries from local health specialists. See Human Health Specialists.

The Heel company in Germany leads the world, in my opinion, in alternative supplements used by many health specialist worldwide. People who have used this drainage system have noticed an improvement in their brain, reduced shaking, improved joints including backs, some of which have been almost rigid.

The sea is today's effluent dump, so seaweeds contain all known heavy metals and toxins and continue to get worse according to our figures. Million year old salts are free of all heavy metals.

Some scientists have attacked the drinking of bottled spring water, but figures show that they are wrong and that some are much lower in toxic elements than typical town waters, often from large rivers which have been heavily polluted.

Dental amalgam contributes an estimated 10 percent of the overall environmental Hg pollution. Mercury from dental amalgam is released into the air when people are cremated, for example. As children we played with quicksilver (Hg) in our bare hands.

Mercury is poisoning millions of people world-wide because of a lack of government legislation and policing to stop the pollution from discarded Hg that is in electronic items and circuit boards across most countries. Coal and oil burning pollution is recognised in USA as a spreader of Hg over the country.

Two of the most alarming findings with regards to Hg are its bad effects on brains and linkage to dyslexia and autism. I googled for 'excess mercury + dyslexia' and 6 million came up, 'excess mercury + autism' and 27 m came up. 'Excess mercury + brain' and 5 m came up. They can't all be wrong. A lot of scientists are, and the NZ medical system often is, and is certainly lax by not applying what some good countries have.

Domestic violence is increasing. Is it being caused by the increasing levels of mercury (Hg) in our bodies, drinking water and non-organic foods?

From the Mercola October Newsletter - The International Mercury Treaty

"October 2013 was a momentous month in the fight against dental mercury fillings, or amalgam. On October 10, a legally binding international treaty to control the use of this toxic metal was signed into action – and thanks largely to the work of The Campaign for Mercury-Free Dentistry, the project organised and led by Charlie Brown of Consumers for Dental Choice, the treaty gives special attention to amalgam.

Making the signing even more poignant, it was signed in Minamata, Japan, a city where hundreds of residents have died, and thousands have become ill, due to poisoning from excessive mercury exposure over a more than 50-year period. The town of Minimata is the site of Japan's worst industrial poisoning (not including Fukoshima, which was radiation), where a factory discharged mercury into local waters, subsequently contaminating the area's fish and shellfish.

Children and foetuses, whose brains are still developing, are most at risk, but anyone can be adversely impacted, especially since mercury bioaccumulates in the body over time. Many residents who ate the mercury-contaminated seafood suffered from severe mercury poisoning, including immune dysfunction, brain and nervous system damage, and death. While the mercury pollution was first recognised in the 1950s, the pollution and resulting health damage continued for decades.

It took a three-year campaign, encompassing five negotiation sessions with all the nations, to sign the United Nations Minamata Convention on Mercury, which requires the phasing out of many mercury-containing products, including thermometers, by 2020, and also calls for an end to all mercury mining within 15 years. Importantly, the treaty is being hailed as marking the beginning of the end for

mercury dental amalgam around the world, as it mandates that each nation phase down amalgam use.

What happened in Minimata, Japan is just one example of the environmental and human-health poisoning caused by mercury pollution around the globe. The treaty brings hope that such tragedies will be prevented in the future. According to the United Nations Environment Program (UNEP), the estimated cost of health and environmental damage caused by exposure to mercury is \$22 billion.

It's considered such a potent toxic pollutant that just one drop of mercury in a 20-acre lake over time would poison the lake to the extent that the Environmental Protection Agency (EPA) would have to ban fishing in it.

It also enters soils and waterways, where it becomes a major contaminant of our food supply, similar to what occurred in Minimata. There must be no more Minamatas – anywhere on our planet!

The mercury used by dentists to manufacture amalgam is shipped as a hazardous material to the dental office. Any amalgam leftover is also treated as hazardous waste and requires special precautions to dispose of, yet it's supposed to be "safe" to keep it in your mouth for years to come. Sadly, many live with toxic reactions for a long time, never connecting the dots between their failing health and the mercury in their teeth and their environment.

In fact, amalgam poses a whole swarm of problems at every stage of its lifecycle:

Dental amalgam

One dental amalgam filling releases as much as 15 micrograms of Hg per day, meaning the average individual, who has eight amalgam fillings, could absorb up to 120 micrograms of Hg per day. In contrast, eating mercury-tainted seafood will expose you to about 2.3 micrograms per day, which is enough for scientists to call for a world-wide warning.

In 1994, Sweden banned the use of Hg fillings in young adults. Denmark, Germany and Austria followed suit. Canada banned it in children under 6 and anyone with serious health problems. California banned them in people under 18.

Why do dentists have four times more Hg in their urine than others, double the suicide rate and die younger? Dental female staff have twice the rate of infertility, miscarriages and spontaneous abortions compared to the rest of the female population.

After seeing three documentaries on amalgam toxicity, I had mine removed in 1992 at age 61. No detox system was used and I had no withdrawal problems. My skin between my elbows and shoulders had been red and rough and were getting worse. Five months after removal of amalgam, my skin and health improved and I ceased to be allergic to chocolates.

A friend who was overweight, lethargic, sick, couldn't work and was diagnosed with 'in your head and lazy' problems, had her amalgam removed and became slimmer, more energetic and now works, but appears to still have some permanent damage. Another eliminated her migraines. Most dentists now acknowledge amalgam adversely affects some people.

New Zealand's 15% GST rate has increased the poverty of the poor, but has no effect on the well off. It should never have been on organic fruit and vegetables and especially not on health costs. I know people in their 60s suffering dreadful Hg toxicity problems such as poor health, mind problems, skin problems, etc., from amalgam, which they can't afford to have replaced with safe fillings.

Natural ways to remove mercury from your body, from Al Sears, MD, www.primalforce.net He has a good Newsletter. We both now take his Primal Force of 27 supplements as a powder to be drunk, and like it.

Dear Reader,

Our primal ancestors lived in a pure environment. They didn't have to worry about contamination from heavy metals like mercury the way we do today.

In prehistoric times, mercury was naturally in coal and stayed there. Today, huge power plants burn coal. They emit mercury into our air and water. When scientists tested about 300 streams in the U.S., a shocking 100% of the fish in those streams had mercury contamination. [And all the water was unsuitable for drinking. VJ]

Modern dentistry is another source of deadly mercury. If you have "silver" fillings in your teeth, you have mercury in your mouth.

Over time, those mercury fillings degrade. They give off poisonous vapors. Corrosion caused by chewing or grinding can increase the mercury released from your fillings. It gets trapped mostly in the

fat in your body, and the 25% fat in your brain.

Natural herbs can pull toxins out of your body.

Exposure to mercury can affect the human nervous system and the brain. It damages the heart, kidneys, and lungs. Some of the most common symptoms include chronic fatigue, insomnia, depression, "brain fog," numbness, and poor memory.

To relieve your body's mercury burden you have to detox. But I don't recommend any of those fad detox treatments. They're not very effective and they can even be dangerous.

Instead, I help my patients remove mercury with a combination of two safe, natural herbs.

The first is chlorella (C. Pyrenoidosa), a form of dried algae. It may be the oldest food in the world. You can find it in most health food stores.

Take one 500 mg capsule per day initially with food. Work up slowly over one to two weeks to a dose of one gram with each meal. You can increase the dose to up to 3 grams three to four times a day.

Some people are sensitive to chlorella. If you start experiencing nausea or burping, it means your body can't tolerate it.

Powerful Medicine For Detoxing and Beyond

Fresh cilantro (Coriandrum sativum) is one of my favorite "supermarket prescriptions." You may know it as Chinese parsley.

Cilantro leaves come from the coriander plant. The seeds you may also know as coriander.

Studies show that cilantro and coriander bind to toxic metals like mercury, lead and aluminum. It loosens them from the tissue and carries them out of your body.2 That's powerful medicine.

The coriander plant is more than just a detoxifier. It's been used for centuries to improve digestion and relieve gas. It's rich in antioxidants,3 and it relieves anxiety4 and improves sleep quality.5 It's even been used to treat diabetes, small pox and inflammation.

I suggest eating at least a 1/4 cup of tightly-packed fresh organic cilantro per day during a detox. I like to get mine by making a pesto sauce using cilantro in place of basil.

You can also get all the benefits from the oil from the coriander plant. Start with just 3 to 5 drops of the oil under your tongue. Slowly increase your dose to up to 3 droppers-full a day.

But make sure you get good quality coriander seed oil. Most companies use high heat to press the seeds or chemical solvents to extract the oil. That damages the oil's nutrients.

My colleagues at Activation Products produce excellent coriander seed oil. They cold-press the seeds keeping all the nutrients intact. And they use no dyes, preservatives or toxins.

This oil is extremely potent, and I'm very impressed by its effectiveness. They produced a real winner, and I highly recommend it.

To Your Good Health, Al Sears, MD, CNS

Mercury and the brain

Mercury (Hg) is a highly toxic substance that is of no use in plants, animals or humans. If you take a piece of Hg the size of one grain of salt and put it in a large swimming pool, the concentration of Hg far exceeds current Environmental Protection Agency (EPA) safety recommendations, which are used in most countries. A fraction of a teaspoon of Hg can render all the fish in a 20 acre lake unsafe to eat. It is in most people's bodies via their amalgam dental fillings, causing severe damage, especially to the joints and brain, and is a double-whammy toxin, meaning that it can aggravate the ill effects of any other allergy. Rid your body of it as soon as possible, before it causes irreparable damage, as it was close to doing to my wife, Auriel, and me in October 2011.

I have spent more time researching the information for this chapter than any other, because, while protecting their professions and incomes, some have contradicted the fact that Hg in amalgam fillings causes a multitude of bad health conditions. While many dentists were still supporting mercury amalgam fillings, three TV documentaries that I watched proved to me that Hg was affecting me.

After seeing these documentaries on amalgam toxicity I had mine removed in 1992 when 61. No detox system was used then.

My skin between my elbows and shoulders was rough and getting worse. Five months after removal that skin started to itch, a sign of getting better. It is now much better than it was and lumps on my forehead have gone. I also discovered I was no longer allergic to chocolate, which had given me boils

since a teenager. The glands under my arms and between my legs used to be sore and bleed occasionally. Now they don't and have completely healed.

A few years later mercury in my hair analyses was still high so I took a detox and two years later mercury in my hair was down to acceptable levels.

A friend who was overweight, lethargic, sick and couldn't work was diagnosed with one of those 'in your head and lazy' problems. She had hers removed and became slimmer, more energetic and now works, but appears to still have some permanent damage - see below.

I searched for "Amalgam" on the Internet on 27 April 1997 and found about 100 items on the problems of mercury in people.

I saw that it causes dentists to suffer more suicides and die younger than comparable professions, but some continue to deny it. Our new and absolutely brilliant dentist, Dr Dave Blom in Hamilton, has not used amalgam since 1996. See Human Health Specialists for his contact details.

Mercury is the worst toxin affecting people today and is increasing in many countries. It is in most drinking waters (polluting all 300 rivers across USA), fruits and vegetables, but not in pure honest organic foods. Be wary that some foods are falsely labelled 'organic' and some genuinely believe their foods are organic, but their soils can be high in toxic elements such as mercury, cadmium, lead, manganese and others. Organic movements have standards, but unfortunately don't police them. To do so completely would mean testing the plants, everywhere, for all toxins. Read Organics.

Brains are adversely affected by what most call 'heavy metals'. I don't call them heavy metals, but poisonous metals, because aluminium is highly toxic, and not heavy, whereas copper is heavy, but needed in very small amounts. People affected by Hg make out-of-character, illogical statements without realising why. One told me that she used to be negative about everything and every one, and after being treated by Chris Rhodes, who drained her Hg, she became positive and cheerful about everything. How often do you think 'why did I say that?', or read something that simply doesn't make sense? The phrase 'mad as a hatter' is a reference to mercury poisoning, as mercury-based compounds were used in the manufacture of felt hats in the 18th and 19th century.

Analyses found that macadamia nuts and macadamia biscuits, and some fish oils were poisoning Auriel and me with Hg. We now get all our foods and supplements tested which costs only about \$3 for each item when doing 30 at a time. See Human Health > Food.

Supplements from some large reputable companies contain high HG levels, so 25% of the vitamins and minerals we were taking contained Hg, cadmium, manganese and/or lead or other toxins. Some were from large supposedly reputable companies. We stopped taking them and had the poisonous metals drained out of our bodies, which improved us unbelievably, stopping my boils and pimples, and freeing up my joints so I could run again and feel younger.

Healthy home-grown vegetables, using no superphosphate or other non-organic fertilisers, and genuine organic foods are essential for good health. Raw green vegetable smoothies apparently drain toxic elements out of bodies. For every second lunch I drink a green smoothy to help do this.

A Good Health Premium tablet a day made our selenium levels too high, because we are growing 90% of our vegetables and the rest are organic. Our fertiliser is described in Gardens, Lawns, Vegetables.

Mercury is not biodegradable and once in the environment, it turns into methyl-mercury, its most toxic form. It has been scientifically demonstrated to be more toxic than lead, cadmium, and even arsenic. It is transported freely in the blood and absorbed directly into, and stored principally in, the brain, kidneys, liver and fat. It adversely affects the immune system, and can induce allergies (chocolate giving me boils when I was high in mercury, but not now that Chris Rhodes has reduced it from 40 in my body and 30 in my urine to 3 and 2, and reduced autoimmune diseases, the most critical of which is irreversible neurological damage). It is attracted to fat/oil and protein which is a reason it builds up in the food chain. The larger fish eat the smaller ones, we eat the larger ones so it ends up in us.

Signs and symptoms of Hg poisoning

Common symptoms of toxic elements in the brain include illogical or irrational thinking and planning, argumentative and unreasonable behaviour. The major symptoms of acute Hg poisoning are extreme fatigue and memory problems, neuromuscular dysfunction, impaired cognitive motor and

language skills, headaches, nausea, severe abdominal pains, diarrhoea and vomiting.

Symptoms of a toxic Hg build-up due to chronic exposure, however, are much more subtle, and include fatigue, aching joints, depression, and digestive problems.

Affected children may show red cheeks, nose and lips, loss of hair, teeth and nails, transient rashes, hypotonia (muscle weakness), and increased sensitivity to light.

High exposures to Hg in its various forms are particularly toxic to foetuses and infants. Pregnant women who are exposed to Hg through substantial excess of mercury-polluted dietary supplements are at risk of giving birth to children with serious birth defects (see Minamata disease).

According to the Michigan Department of Natural Resources, chronic Hg poisoning can cause degeneration of nerve tracts that lead to weakness, loss of coordination, blindness and coma.

Symptoms in animals

Animals poisoned by organic Hg can suffer blindness, excitation, abnormal behaviour, chewing, incoordination, and convulsions. Fish accumulate Hg, as do animals and humans. In animals Hg toxicity is unlikely unless feeding excessive amounts of fish and keeping animals to an old age.

Cats show hind leg rigidity, ataxia and tremors.

There are reports of commercial cat food causing severe neurologic disturbances in cats fed an exclusive tuna diet for 7 to 11 weeks. Cats and dogs suffer after eating macadamia nuts or biscuits, all of which contain mercury.

Whales with mercury affected brains can cause them to beach themselves, as can inbreeding both of which are increasing, because there are so few now. The Mediterranean Sea had hundreds, now none. Whalers from Christchurch could catch a dozen a day in an old wooden sailing boat.

A marine park had problems with their sea lions and other sea life dying from excess Hg when fed fish from a high mercury area. There are pools of mercury on the deep sea beds in some areas. Symptoms were stomachs full of undigested fish bones which weren't being dissolved. Some changed their source of fish and had no more problems.

Causes

Mercury is found in a wide variety of sources: dental amalgam fillings, fish, some medications and many supplements, modern pain killers, occupational exposures to mercury vapour, gold production, some skin ointments, some soaps, health supplements of some companies, many non-organic fruit and vegetables, and even natural macadamia nuts and biscuits made from them.

Hg polluted fish and sea foods are the most significant sources of ingestion-related Hg, although non-organic plants also contain Hg due to bioaccumulation of it from the soil, water and polluted atmosphere. Exposure to Hg can occur from breathing contaminated air, eating foods that have acquired Hg residues during processing.

Human-generated sources, such as coal plants, emit approximately half of the atmospheric Hg, with natural sources, such as volcanoes, responsible for the remainder. An estimated two-thirds of human-generated Hg comes from stationary combustion, mostly of coal. Other important human-generated sources include gold production, non-ferrous metal production, cement production, waste disposal, human crematoria, caustic soda production, pig iron and steel production, Hg production (mostly for batteries), and biomass burning. In New Zealand, geothermal bores bring it up from the deep (Hg is very heavy so sank down there over millions of years).

Consumption of whale and dolphin meat, commonly practiced in Japan, is a source of high levels of Hg poisoning. Tetsuya Endo, a professor at the Health Sciences University of Hokkaido, has tested whale meat purchased in the whaling town of Taiji and found Hg levels more than 20 times the acceptable Japanese standard. Dolphin meat has been measured at 2,000 ppm, where the recommended safe concentration is 0.4 ppm. I believe that no Hg is safe for humans or animals.

Kelp supplements can be a source of Hg poisoning. One of the most famous cases of Hg poisoning was seen in the 1950s when residents of Minamata Bay in Japan contracted a progressive disorder of the central nervous system due to Hg-tainted plants from the sea. The world is becoming more polluted and the sea is its sewer. Read Pollution. All the seaweeds and supplements containing sea plants we have measured are high in Hg.

Cheap supplements usually have more Hg.

The following may also contribute to mercury poisoning

Some adhesives, air conditioner filters, algaecides, antiseptics, battery manufacturing, body powders, broken thermometers, calomel lotions, cereals, cosmetics, dental amalgams, diuretics, fabric softeners, felt, floor waxes, fungicides, germicides, grains, industrial waste, insecticides, laxatives, lumber, manufacture of paper and chlorine, medications, mercurochrome, paints, paper products, pesticides, photo engraving, Preparation H, psoriasis (red bloches on face) ointment, some seafoods, sewage disposal, skin lightening creams, soft contact lens solution, suppositories, tanning leather, tattooing, water (contaminated), wood preservatives and polluted water from deep bores like Waitangi near Taupo. Hg being heavy goes down and then comes up in very deep bores and after generating power, runs into the Waikato River. Hg is used in chelating (gluing) paper, so most papers contain Hg. It is used in the Kinleith paper mill. Surplus runs into the Waikato River. The White Island volcano brings up Hg. There are undersea pools of it, some of which is consumed by fish (New Zealand's East coast fish and water have more Hg than our west coast, deep sea fish like Orange Roughy, more than surface swiming sardines and Krill oil.

Lights and lamps

Fluorescent eco lamps contain Hg, which is released when bulbs are broken. Mercury in bulbs is typically present as either elemental Hg liquid, vapour or both, since the liquid evaporates at ambient temperature. When broken indoors, bulbs may emit sufficient Hg vapour to present health concerns, and the USA EPA recommends evacuating and airing out a room for at least 15 minutes after breaking a fluorescent light bulb.

Breakage of multiple bulbs presents a greater concern. A 1987, report described a 23-month-old who suffered anorexia, weight loss, irritability, profuse sweating, and peeling and redness of finger tips and toes. This case of acrodynia was traced to exposure of Hg from a carton of 8-foot fluorescent light bulbs that had broken in a potting shed adjacent to the main nursery. The glass was cleaned up and discarded, but the child often used the area for play.

Mercury is in the new power-saving light bulbs which emit very little light but last longer. Halogen ones use less power and are brighter, and without problems. I know of someone who broke a light bulb containing Hg while vacuuming, which lead to itching, that was eventually stopped by having a sauna to sweat it out.

Vaccines and autism

Dr. Kurt Woeller, an osteopathic physician in Temecula, California believes there is a link between Hg toxicity and autism, and focuses his practice on autistic children. Woeller believes that a series of childhood vaccines containing the mercury-based preservative thimerosal are to blame for the rising autism in the United States. "My suspicion is that the mother had a toxic mercury load that has filtered to the child, and the mercury-containing vaccine was the straw that broke the camel's back," he says.

Thimerosal has been banned in many countries, including Denmark, Great Britain and Austria for two decades, but USA only recently reduced or eliminated thimerosal in vaccines for children aged six and younger, and stated that thimerosal-containing vaccines were associated with autism. Nearly 5,000 families have filed lawsuits claiming that childhood vaccinations caused their children's autism. New Zealand has recently eliminated thimerosal in most vaccines, however, flu vaccines still contain it http://www.healing-arts.org/children/vaccines/vaccines-mercury.htm.

Rates of autism increased when the Centre for Disease Control added to the recommended vaccination programme for infants in 1988. In the 1980s, autism rates were estimated at six in 10,000 children. Today, autism rates are one in 150 children, though some say autism affects closer to one in 50 children in some areas.

Mercury in our foods

Peanuts (the most unhealthy nut there is), macadamia nuts (the third most unhealthy and high in Hg), pecans, and pistachios often contain mercury (Waikato macadamias had no Hg level the last time they were tested by Chris Rhodes measurements).

I have had dozens of vegetables and fruits tested for mercury by Chris Rhodes and all, except organic and those we grew, contained mercury, I believe mainly from artificial fertilisers like

superphosphate and those containing it. Read > Fertilisers.

Mercury in fish

Fish and fish oils are a cause of high Hg levels in people. Levels are highest in large, predatory and deep sea fish, as Hg is very heavy so sinks to the bottom, and can be seen as dark pools under the sea around White Island.

Most fish contain trace amounts of Hg, but high levels are found in shark, swordfish, orange roughy and marlin, so should be avoided. Professor Klaus Heumann of the University of Mainz (Germany), found up to 1,400 micrograms of methyl mercury in shark steaks - 60 times more than the safe daily limit for a 70 kg person.

High to moderate levels are found in tuna, bass, cod, halibut, lobster, snapper and oysters, and should be eaten no more than a few times a month. Seafood with minimal amounts of Hg include: flounder, crayfish, john dory, trout, salmon, sardines, scollops, squid and shrimps. The surface swimming by nature Sardines have none.

Fish from the East Coast of New Zealand have a lot more Hg than from the West Coast because the live volcano on White Island has pools of Hg under the sea around it and fish there are very high in Hg. Fish levels decrease to Auckland and to Wellington. Google for "New Zealand fish + mercury". Northern Hemisphere information shows all their older fish have Hg.

The amount of Hg in the environment affects the level in fish, for example, the freshwater fish living in geothermal waters in New Zealand tend to accumulate higher levels from that water.

Food processing, preparation and cooking techniques DO NOT reduce the amount of Hg in fish.

Most people have blood Hg levels less than 50 nmol/L, and levels up to 100 nmol/L are often seen with no adverse effects in fish eaters. Levels >500 nmol/L should be regarded as indicating high risk, and toxic effects have been clearly demonstrated at blood Hg levels >1,000 nmol/L.

In the USA, the Environmental Protection Agency's reference dose for Hg in fish is 0.1 micrograms per kilogram of body weight per day, and is said to be the highest amount that the most sensitive people can be exposed to over a lifetime without experiencing an adverse effect. This regulatory standard - the most stringent in the world - is based on calculating the lowest dose at which a subtle subclinical effect was thought to occur (meaning the effect was not actually observed) and then building in a ten-fold safety factor. The UK's Food Standards Agency uses the safety standard applied by the World Health Organisation, that allows 3.3 micrograms of methyl-Hg per kilogram of body weight a week for the general population, and 1.6 micrograms of methyl-Hg per kilogram of body weight for pregnant and nursing women.

All should avoid mercury in any form, especially fish and fish capsules. Pregnant or nursing women and young children should avoid Hg fish, as should people already suffering from Hg accumulation in their bodies. The USA Food and Drug Administration (FDA) and the EPA advise women of child-bearing age, nursing mothers, and young children to completely avoid swordfish, shark, king mackerel and tilefish from the Gulf of Mexico, (Golden Tilefish from the Mid-and North-Atlantic present no risk), but limit consumption of albacore ("white") tuna to no more than 170 g per week, and in all other fish and shellfish to no more than 340 g per week.

Farmed fish

These are not necessarily healthier for fish eaters, the environment or the consumers. Not only do you still have the problem of Hg, but farm-raised fish also have higher levels of PCBs, another poisonous industrial byproduct. Residues in farm-raised fish can be as much as 9 million times the amount found in the water.

In order to be profitable, fish farms must raise large quantities of fish in confined areas, and the overcrowding leads to disease and injuries to the fish. The fish can therefore be given antibiotics and chemicals for parasites like sea lice, skin and gill infections and other diseases that commonly affect them.

Making matters worse, these fish are also given drugs and growth hormones, and are sometimes genetically modified to accelerate growth and change their reproductive behaviour.

Farmed salmon are given the chemicals canthaxanthin and astaxanthin to turn their flesh pink; without these additives, their flesh would be grey. Wild salmon eat a diet of shrimp and krill, which contain natural chemicals that make the salmon (and flamingos) pink.

Fish oil supplements

I used to recommend taking fish oil capsules, but now there is too much mercury in large old deep sea fish. In 2009, after taking omega fish oil, my Hg levels and symptoms returned quite severely, so I stopped taking them and got better. I had it tested and it was high in Hg, despite the container saying, "Mercury tested".

Fish oils also have other drawbacks. Most importantly, fish oil is low in antioxidant content and, as you increase your intake of omega-3 fats by consuming fish oil, you can increase your need for antioxidant protection, as fish oil is highly perishable and can oxidise to form unhealthy free radicals.

I now recommend getting your omega-3 fats from Antarctic krill oil as it contains phospholipids, more than 47 times the antioxidant levels found in fish oil, and omega-3's bonded together in a way that keeps them safe from oxidation, and easily absorbed in your body. Additionally, your risk of getting any Hg contamination is extremely low since krill are so small they don't have the chance to accumulate toxins before being harvested.

Apparently plant-based omega-3s DON'T work as well, so it is important to include animal-based sources of omega-3 fats.

Mercury is a major problem in and around the North Sea. From January 2008, Norway introduced a total ban on the use, storage, buying, selling, manufacturing, importing and exporting of Hg. "Mercury is among the most dangerous pollutants", said Erik Solheim, the Norwegian Environment Minister.

The ban put Norway ahead of the European Union, which has now banned Hg in measuring instruments, including thermometers, in the first half of 2009, and exports of Hg in 2011. Some EU countries, including France, already have bans on Hg thermometers.

Get tested

There are two health organisations I know of in Hamilton measuring Hg and other toxic elements. One is Biomedicines and the other is Chris Rhodes Naturopathic Clinic. See 'Human Health Specialists' for information on both in www.humanhealth.co.nz

High levels of Hg are highly antagonistic to selenium uptake, so people with suspected high Hg levels (from Hg based amalgam teeth fillings) should take ample selenium and vitamin E and have their amalgam removed,

If having your amalgam removed, find a reputable dentist who will use rubber dams and take advice from a qualified health provider to drain the toxins from your body once removal is complete. If you are not well again within 6 months, look at a full detox.

You can get your urine tested scientifically for toxic metals by Chris Rhodes, Naturopathic Clinic, 45 Cunningham Rd, Te Rapa, Hamilton 3200. Phone 07-850-6300 cpr@xtra.co.nz

Damaged patient

"The following statement was written by one of Dr. Smith's patients to the Food and Drug Administration in response to various attempts that are being made to have mercury fillings FDA-classified as a Class II Device. Such a classification which would result in the avoidance of scientific scrutiny of the effects of mercury poisoning.

"My first amalgam was placed at the age of 3. By 7 half of my "baby" teeth had amalgam fillings. From 3 on I had severe allergies, asthma, skin rashes, horrible headaches, difficulty sitting, reduced energy, trouble concentrating.

"In my teens I had awful menstrual periods, later developed endometriosis and severe MIGRAINE headaches. In addition, my immune system had been compromised and I developed Epstein Barr virus, Chronic Fatigue Syndrome, Restless Leg syndrome and Periodic Limb Movement Disorder - all MEDICALLY DOCUMENTED.

"As I entered my forties I began to get sicker and entered early menopause. At an anti-aging conference I met a holistic doctor who informed me I needed to "get that toxic metal our of your mouth." My traditional dentist had not a care about the poison he had put in my mouth for years. For some time I had been complaining of pain in my head, jaw, sinuses and face. He said that there was nothing he could do. I found a biological dentist at the point where my teeth were spontaneously bleeding and I could chew nothing without pain (you'd think I'd have been a toothpick from not being able to eat -- too bad that wasn't true).

"Once the last amalgam was out of my head, within three days I felt like a new person. I began sleeping through the night, my legs stopped jumping every three minutes ALL NIGHT LONG -- and I have had my fifth sleep study to confirm that this is the case. Until I had the amalgam removed, my mercury level was TOXIC - way beyond the range in my serum, and mercury does NOT reside in plasma, it resides in organs and tissues, so you can imagine how much I had in my system.

"My mercury level is continuing to drop with chelation therapy and I continue to feel better. Unfortunately, even my two sons had TOXIC levels of mercury, as mercury crosses the placental barrier and the offload goes to the unborn foetus!

"I compounded the problem by nursing each of my sons for almost a year ... turns out mercury is also present in breast milk - in toxic doses depending on the mother.

"Their mercury levels and subsequently their behaviour has continued to improve over the last two years as we have continued to chelate these two young boys. How many other millions of children are labeled with ADHD, OCD, depression, anxiety and behaviour disorders... when in fact the real problem is MERCURY poisoning from their mother and the foods that they eat.

"I appeal to get this dangerous substance banned. Sincerely,

Vaughan Jones, ONZM Queen's Honour 2013, for services to farming. 99% dairying honours in 1948. NZ Dairy Board winner for Most Improved Dairy Farm in Waikato 1959. International Agricultural Consultant & Journalist. Represented NZ in Agricultural Journalist Congresses in USA in 1992 & Austria in 1994. Managing Director of GrazingInfo.com website since 1970, to 490 members.

NZ M.Mkt.I founder and chair. Doubled sales and exports for many companies.