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How does Mercury and Heavy metals affect our lives?

We are exposed to great amounts of pollution for example lead from motor vehicles exhaust, industrial pollution also cadmium and mercury. More specifically we as dentists have been putting mercury which is more toxic than lead, cadmium and arsenic into peoples mouths. Just recently about one hundred people died from drinking underground water in Bangladesh that was contaminated with arsenic sediment soils. Now the question is how did the mercury that comes out of amalgam fillings through mercury vapour, amalgam break down produces and mercury ions from galvanism in the mouth effect our lives, our minds and our health. To get more precise we have to show our dental colleagues that the issue of micro-mercurism is significant and undermining peoples health to the point of no return.

The human body is basically made up from the elements in the periodic table. In order to understand mercury and how it behaves one must investigate the periodic table. The elements themselves are either classified as non-metals, semi-metal and metals. The higher up an element is in the periodic table the more easily it displaces a less reactive metal. In other words sodium is stronger that potassium. Another aspect which arises is that human beings are organic and involve a whole lot of carbon chemistry of which proteins play a big role due to the fact that proteins have an intelligence. Like a computer can do mathematic calculations and beside regulate body chemistry. Thus we can control the level of sodium and when that is met potassium fills in and when that is met calcium fills in and thereafter to metals and minerals with heavier molecular weights. By the time we get to gold and mercury the requirement is non existent. The atomic number of gold is 79 and mercury is 80. Lead is 82. Now because of such things as acid rain, mining, use of fertilisers, industrial by products etc the minerals or metals are beings dissolved out of the soil and entering the food chain. Specially the heavy metals. The heavy metal are having great affinity for the sulphur radicals and selenium. Now sulfur radicals are very abundant in nature and is one of the components of protein molecules and is reasonably safe. However selenium is a scarce element and is toxic in high does and beneficial in small does and necessary for controlling electron transfer in our body. The more the heavy metals the more the need for sulphur and selenium to be balanced out in order to keep the body healthy.

So let ask some questions:

Q. Why do I have to understand nutrition?
Q. Why does mercury come out of the filling and what is its ionisation potential?
Q. What happens once ionisation of mercury takes place in the body?
Q. Do I understand the periodic table?
Q. What does radiation have to do with free radicals?
Q. What is the body's capacity to deal with free radicals?
Q. Why is cancer the number one cause of illness in Australia today and has taken over the cardiovascular disease?

There are 50 essential requirements for normal health of which two essential fatty acids eight essential amino acids (10 for children, 11 pre-mature infants).
Thirteen vitamins
20 or 21 minerals (not sure about tin)
A source of energy (carbohydrates are the cleanest source)
Water
Oxygen
Light are necessary.
There are accessory nutrients they include orotic acid, Pangamic Acid, Coenzyme Q10, Inosine, Choline, Inositol, Lipoid Acid, para amino benzoic Acid, N-acetyl glucosamine, N-acetly cysteine, Carnitine, non essential amino acids, hormones, neuro transmitters derived from amino acids, EFA derivatives and bioflavonoids. (For more information read "Fats that Heal and Fats that Kill by Udo Erasmus.")

Other factors necessary for health include fibre, friendly bacteria, hydrochloric acid, digestive enzymes and adequate bile. Once mercury comes out of the filling and enters the body it has to ionise. One way it ionises is by way of galvanism and is specially taking place with dissimilar metals like gold and mercury and especially in an acidic mouth. If the saliva is acidic the chances are the blood is acidic and the urine is acidic. This is not a very healthy profile. This might be the case as in arthritis and muscle weakness where energy production is taking place via the lactic acid cycle or anaerobic respiration. Furthermore in cases with asthma or bronchitis the lungs are clogged with mucous. The second way mercury vapour enters the lungs where it is ionised by strong enzyme system catalase. Mercury loses an electron an is quickly taken up in the hemoglobin and red blood cells and since it is now ionised it requires to stabilise itself by taking back its electron that it has lost or to take electron from a non-metal for which it has greatest affinity for sulfur or selenium. Sulfur as in sulfur proteins is fairly abundant in the body but more especially in the enzyme system and hormonal systems of the body. On the other hand Selenium is required by the body for the enzyme system glutathione peroxidase which is similar to another very important enzyme as super oxide

dismutase. These enzymes control the oxidation process in our cells and prevent us from burning up or the cell membrane from getting oxidised and becoming rancid, in other words having dirty fat in our body. This can all be explained and is only a brief summary.

Mercury by taking away selenium an making the glutathione peroxidase system in effective leading to greater free radical damage in the body or to destruction by ageing of susceptible cells these lead to organ inefficiencies and disorders and eventually lead to system failure. The condition can be such that the free radicals in the body can damage cell membrane, structures in the cell and even the DNA and RNA which is the blue print for the replication of the cell. Eventually leads to mutation or cancer. This is only a very slow way of electron damage where as radiation is a quicker way. One of the most of the susceptible organs to failure is the thyroid, liver, kidneys, brain and the digestive tract. Thus when the thyroid or liver is affected we get a disturbance in fat metabolisms indicated from the several health questionnaires that I carried out from several patients I have suspected of having mercury toxicity. One only has to look at the miners in Spain, the mad matter syndrome or the Minnamatta disaster that it all relates to a disease where fats and oils in the body are affected.Thus an example is Alzheimer's disease and in the case of short term memory loss or MS. Now knowledge of nutrition helps us re establish a proper digestive system which will digest fats and oils and assimilate them to give us the necessary cells and organ structure to put our health back together. We have to utilise the periodic table in order to provide detoxification of the body. For example zinc is higher up and will displace mercury it can cross the blood brain barrier and remove mercury from the brain. Basically what i'm trying to say is that pollution, heavy metals and chemicals alter the nutrient levels in our bodies. Slowly it increases the chances of organ failure and disorders. Not necessarily by leaving large deposits of chemical in the body.

Q. What is the body's capacity to deal with radicals?

The younger we are the greater out body's capacity is with dealing with free radicals, for example if you take a sugar molecule and in the process of using that sugar molecule a hydroxical radical is a byproduct. The hydroxyl radical has the same power as a hydroxyl radical in a container of draino or caustic soda. In other words it eats protein or it will eat collagen. The subsequent scaring or damage brings about the effects of ageing as in wrinkles, grey hair etc. There are two mechanisms responsible to prevent free radical damage. They are enzyme systems in the body such as SOD or Super Oxides Dismutase, catalase, which prevents oxidation of the body by oxygen free radicals. The other is Glutathione peroxidase. Pollution as in heavy metals affects especially the Glutathione peroxidase system.

The end result of pollution and heavy metal toxicity is to disturb energy production, which leads to muscle fatigue and wasting. It affects fat metabolism to great extent. Thus any tissue and old tissue that has lipids or fats is impaired. In this case usually

the liver is affected. Eventually the brain tissue which is largely composed of fat is severely impaired. This can be seen as in the case of the mad hatters, cases of Minamata where babies were born with cerebral palsy and degeneration nervous system condition. Memory loss, irritability, anger, loss of focus, loss of presence inability to relax are all earlier signs of the nervous system of fatty tissue breaking down.

In order to correct the condition one has to have a good background of chemistry and nutrition in order to help people to correct energy problems and problems with fat digestion. A good starting point is to get a good health questionnaire in order to get a base line of their health. There is usually a problem with low stomach acidity leading to protein maldigestion putrefaction and autointoxication. There is a whole subject to be dealt with Gut Barrier Problems, Leaky Gut. Looking at the liver and how it handles fats and toxicity.
Understanding liver function such as cytochrome p 450 as in activation and conjugation hold a key to mercury detox and handling dirty fats. Incidentally all this is partly achieved by use of specific antioxidants. If we look at all the supplements we advise our patients they are mostly antioxidants such as Selenium, Vit C, Zinc, Vit E, the B vitamins, Vit A, Chlorophyll etc. and many specific plant such as bioflavonoids carotenoids, herbs etc. These are all antioxidants. In general chemistry all reactions are either oxidation or reduction which involve either loss or gain of electrons effecting the atomic or sub atomic shells.
Every individual supplement needs to be understood in regards to individualise potency and timing for each patient.

There is something I would like to add and that is the effect Viruses, Parasite and Fungi play in the unwell patient especially the Mercury Toxic Patient. These are the ones that come to see us and it can be rather rewarding to educate and help them recover. It can also be frustrating and painful for all of us if the results are not there and the patient feels worse then before.

Another aspect is the hyper or hypo thyroid patient and there are a abundance of these cases. A lot of this is in unchartered waters, but with a lot of observation and common sense a lot can be done. The hyperthyroid cases have too much energy may be a combination of physical or nervous, possibly react in a hyperimmune way producing excess free radicals and inflammation. These benefit greatly from mercury removal from the body. The hypothyroid case is a total different ball game and need to be monitored a bit more closely and helped. Energy needs to be increased nutritionally and hormonal blood test checked from time to time. These are the ones who put on weight and have dry skin. A hyperthyroid case can turn into a hypothyroid case eventually due to exhaustion of the thyroid gland. Fat and oils especially the oxidised type have a significant role to play in their health as both types are affected.