



Holistic Medical Centre

Dr Helen Smith, Dr Jackie Mills, Dr Fiona Gordon,
Dr Glenn Twentyman

Naturopaths: Rebecca Jones & Nelly Graham-Stewart
www.holisticmedicalcentre.co.nz

103 Pt Chevalier Rd
Pt Chevalier
Ph 09 815 0567

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What does metabolic rate mean?

There is a lot of information out there about thyroid, metabolic rate and weight loss or weight gain. We often get asked about this so we thought we would explain it in a way that is easy to understand. In all the cells in your body you have what can best be described as a microscopic engine called a mitochondria. The function of this engine is to burn fuel and produce energy that your body can use. There are several steps involved in this cycle of fuel consumption and energy production and this cycle is called the Krebs Cycle. The rate that this happens at is called the metabolic rate. The Krebs Cycle generates heat and this is why basal body temperature is associated with metabolic rate. The thyroid gland sets the rate at which this happens with the hormone called thyroxine. You could think of the thyroid as the drummer that sets the pace. If the thyroid gland is under active, this means there is not enough thyroxine. This will cause the metabolic rate to slow down and the common signs of under active thyroid begin to appear. The signs and symptoms of an under active thyroid (slow metabolic rate) are weight gain, low basal body temperature, fatigue, constipa-

tion and thinning hair. These symptoms MAY be due to an under active thyroid but anything that slows down metabolism (the Krebs Cycle) can cause these symptoms. In previous newsletters we have discussed thyroid function; but here is a quick recap. The main thing to note is that the thyroid function is generally monitored with a blood test to measure Thyroid Stimulating Hormone (TSH). The normal clinical range for this hormone is 0.4 - 4. We consider IDEAL thyroid function to yield a TSH result of 2.0 or less. We know many of you come to us in utter frustration because you feel that you have the exact symptoms of under active thyroid but all your blood tests keep coming back with a normal thyroid result. Some people have decided to take whole thyroid when they discover that they have a low basal body temperature. We have found that those who elect to do this when thyroid function is normal can develop feelings of anxiety with a racing heart but the fatigue is unrelenting. Take heart, your thyroid may be fine but you still may have a slow meta-

bolic rate for other reasons. There are many other factors involved with efficient metabolism apart from thyroid as some of you already realise. There are many nutrients required in the Krebs Cycle. All the B vitamins are needed, especially B2 and B3 as well as zinc and magnesium. Co enzyme Q 10 is essential and improves energy production. This is high in sardines and mackerel but is also made in the body with the B vitamins. Vitamin K is also an important nutrient (rich in Kale) that can also be made in the bowel with beneficial bacteria (see last newsletter on probiotics). Alpha Lipoic Acid is also essential which is made in the body from B vitamins and also available as a supplement. For those with fatigue we add an autoantibody screen to the blood test. This means we are looking to see if the immune system is interfering with normal cells. We often find that there is low level of autoimmune activity which interferes with the Krebs Cycle and will contribute to fatigue. If there are positive autoantibody results then we address this separately.

Our favourite quote

Angels can fly because they take themselves lightly
Gilbert Keith Chesterton

Health tips

As mentioned below soy can be significant with urinary symptoms but we have also found probiotics very useful when there has been a significant history of antibiotics without ever having replaced the beneficial bacteria. It is very worthwhile trying this if you fit this description. There is also a hormone called Anti-diuretic hormone (Vasopressin). Low levels of this hormone cause excess urination (Severe deficiency = Diabetes Insipidus). This hormone is made from amino acids and we have had good success at improving excess urination with supplemental L-Phenylalanine or Amino acid powder. Spirulina is high in the important amino acids

Happy Patient File

We just spoke to the mum of a 5 year old boy this morning and she last visited us with him in September last year. He had urinary frequency (about 20 times a day) and no sign of a urinary tract infection. We suggested he stopped soymilk, soy flour and soy protein (he was drinking lots of soymilk) as we have noticed that this can be a urinary irritant in some people. She told us this morning that she had done just this and was very happy with the results and grateful for this simple piece of advice.

Wounds

Some of you may have heard about the marvelous healing ability of Manuka honey especially for non-healing ulcers and burns. If you haven't you may wish to take a look at the following website <http://bio.waikato.ac.nz/honey/special.shtml>. At the clinic we use a sterile active Manuka honey for wound care under

some dressings where appropriate. This would be a good thing for you to keep in your first aid kits for dressing wounds or burns. It is a remarkable antibacterial and promotes healing of tissue. There are some remarkable photos available online to demonstrate its use in non-healing diabetic ulcers.

Recently we had the good fortune to try some Apinate (TM) dressing from Comvita. This is an alginate (seaweed) sterile dressing which is infused with Active UMF® Manuka Honey. A ready-to-use sterile dressing that is particularly effective for 'wet' wounds. This could also be

useful in the first aid kit depending on how prone your family is to acquiring burns and wounds.

An update to our last newsletter: Dr Leigh Sindelman will not be joining the practice due to changes in her personal circumstances. We wish her well in her future endeavors.