Message from the Tonic Media Network Editorial Committee*

Welcome to another edition of *Practice Connect* – your personal, practice and patient focussed newsletter with up-to-date news and information.

Salt substitutes: are they for you?

There is growing and strong evidence that substituting potassium for sodium in salt is good for blood pressure and stroke prevention. There are a few people who shouldn't do this, but I'll come back to that later.

The George Institute in Sydney, well known for its large clinical trials in heart disease around the world, has had a large ongoing study in China comparing people who used salt where 25% of the sodium had been replaced with potassium. This is the level where people can't detect any difference in taste. he first report from this trial showed significant reductions in blood pressure in the people taking the potassium substitute. The most recent paper was into the highest risk group – those who'd already had a stroke and therefore were at high risk of another. The people on the potassium salt have a significantly lower risk of a recurrent stroke compared to those on regular salt.

The implications of this study are enormous since we consume far too much sodium – almost twice as much as recommended. The point is that if potassium substituted salt was more easily available it could benefit large numbers of people.

People who really need to take the advice of their GP about potassium substitution are particularly those on medications which stop the body getting rid of potassium (these are certain kinds of water pills or diuretics) and people with kidney disease or kidney damage because apso impairs the body's ability to keep potassium levels normal. For the rest of us, our issues are more commonly with lower levels of potassium.

In Australia potassium substituted salt products are usually at a level of 50% and they're found in the health aisle of your supermarket rather than the spice section.

Further information
This salt alternative could help reduce blood pressure. So why are so few people using it?
MyDoctor.com.au

What you need to know about salt

Wherever you look in the world, salt intake is higher than it should be. Of all the deaths from heart disease, excess salt intake is a significant cause in more than 1.5 million of them. Salt raises blood pressure and makes the natural increase of blood pressure with age worse, and therefore the risks of stroke and heart attacks go up. But that's just part of the story. There are growing suspicions that salt increases oxidative stress and inflammation (two of the biological processes behind ageing) and may increase the risk of Alzheimer's disease and autoimmune diseases like rheumatoid arthritis. Salt is of course addictive and makes food taste good. Most salt comes from processed foods rather than the salt you add and making flavoursome, herb dense meals distract from needing added salt. Reducing how much you eat through portion control will naturally reduce your salt intake.

There is confusion about knowing how much salt you're eating. There are two measures: sodium and salt. Sodium is what does the damage, but it comes in salt which is sodium chloride and salt weighs 2.5 times more than its sodium content. The aim should be to keep your *sodium* intake to 2 grams a day. That's 5 grams of salt. So if the pack says there's 500mg of salt in a serving, that's 200mg of sodium which is 10% of your target intake. 5 grams of salt is about a teaspoonful.

Salt intake by Australians is double the recommended intake in men and 50% greater in women. A review of data on almost 17,000 Australians where their salt intake was quite accurately measured, found that men were consuming over 10 grams of salt a day and women well over seven grams. That's a lot of extra sodium a day and mostly from processed foods including bread.

Salt increases your blood pressure and your risk of heart attacks and strokes in various ways. Too much sodium in the blood makes your kidneys retain more water and that raises blood pressure. It's also clear that excess sodium can damage arteries and is linked to stiffer, less elastic arteries which in turn can make high blood pressure worse and cause kidney damage. High blood pressure and diabetes are the commonest causes of kidney damage as people age and kidney damage products premature death from heart disease.

The damage that salt can do to arteries - particularly the lining (endothelium) could be behind the observation that salt intake is related to the risk of Alzheimer's disease. Experiments in mice have shown that dietary salt can induce the production of the tau protein which gums up the brains of people with cognitive decline and Alzheimer's. One possibility is that salt increases oxidative stress in the memory part of the brain called the hippocampus. This oxidative stress may also increase the chances of cholesterol damaging the arteries through atherosclerosis.

Excessive salt intake is moderately associated with the risk of stomach (gastric cancer) in many studies. Salt may make the effects of the ulcer germ H. Pylori, worse and probably damages the stomach lining directly.

There is growing evidence of a link between salt intake and autoimmune diseases such as rheumatoid arthritis and perhaps multiple sclerosis. It's early days in the research but the suggestion is that excessive sodium takes the foot off the brake which holds back the abnormal immune responses. This allows the immune system to become inflamed and attack various parts of the body such as the linings of the joints (rheumatoid) and nerves (MS).

If you're not able to substitute potassium in your salt, then reducing your salt intake requires a bit of effort. A weight loss or weight maintenance diet with portion control will lower sodium intake just because you're eating less. Cooking your own food rather than buying processed foods will help because you will be in control of the added salt. There is also evidence that you can fool your taste buds by the aromas from herbs, adding lemon juice to salads or cooked vegetables, using coarse pepper and even tiny amounts of ham.

Unlike cholesterol where you really cannot go too low, with salt there's probably a sweet spot at around the recommended levels of two grams of sodium/five grams salt per day. While some people

are more salt sensitive than others, there's little doubt that if we can shift the average salt intake by the population downwards, it could have an enormous impact.

Aspirin to prevent cancer spread

There's been some news about a study which suggests that aspirin might prevent cancers spreading to other parts of the body.

It's been suspected for a while that aspirin might have anti-cancer effects. For example, there's evidence it can prevent or slow the development of bowel polyps – the pre-malignant phase of colorectal cancer. There's also some evidence of breast cancer risk reduction.

This study was in mice, not humans. And the cancer the mice were susceptible to was melanoma.

The mice given aspirin were much less likely to develop melanoma metastases (cancer spread). The explanation is complex. Aspirin inhibits the action of platelets, the tiny cells in the bloodstream involved in blood clotting. It does this by interfering with a particular enzyme. It turns out that this enzyme also exists in immune system cells called T cells which are involved in cancer control. Aspirin in these mice appeared to be acting like immunotherapy by unleashing these T cells allowing them to attack and mop up melanoma cells which might have been released into the bloodstream.

It's an exciting finding but….. and there's always a but….. this was in mice and mice aren't humans.

And it was in melanoma which is known to be a cancer that's particularly sensitive to the immune system. Whether this is generalisable to people and other cancer types remain to be seen.

Who benefits from low-dose aspirin?

The evidence is that taking low dose aspirin when you're otherwise healthy has no benefits and only risk from bleeding and injury. A huge Australian study of many thousands of people with no heart disease or cancer who were given aspirin to prevent these diseases arising, found no effect.

The people who do benefit from low dose aspirin – and very significantly – are those who have had a heart disease event of some kind for instance a stroke, a short-lived stroke (used to be called a transient ischaemic attack), a heart attack, angina (chest pain on exertion), or have need a stent or cardiac procedure. The reason aspirin works in these situations is that the arteries have areas of damage on which blood clots can form therefore the anti-platelet effect of aspirin can stop or reduce the risk of that happening.

Aspirin is not a medication to start without first discussing with your GP.

Physical signs that dementia may be on its way.

A recent study into aspirin to prevent disease has turned up interesting findings in relation to dementia risk. When the trial was over, the researchers got the people in the trial (around 19,000 of them initially, mostly older) to agree to be followed up to monitor their general health. This had nothing to do with aspirin. The researchers simply wanted to use the fact that they had thousands of older Australians whose health and wellbeing was known in detail and could be followed to see what happened to them.

One of the conditions they were looking for was dementia and indeed over a thousand of the participants did develop dementia. When they were compared to similar people who didn't develop dementia, they found that there were physical signals up to 11 years beforehand. People who developed dementia were more likely to have had weight loss, loss of waist circumference and a rise in what some people call the 'good' form of cholesterol, high density lipoprotein cholesterol – HDL.

The researchers did not believe that the changes caused the dementia but that the early changes in the brain had affected things like appetite or food preferences.

So what do you do with this information?

Well, unexplained weight loss needs to be brought to your GP's attention so it can be investigated.

There are many other causes than the earliest signs of dementia.

But if there are not reasons found, then what do you do? Live in fear of dementia? The answer is no.

There are many changes we can all make which lower dementia risk. These include:

- Don't smoke
- Treating high blood pressure
- Keeping diabetes well under control
- Frequent moderately intense exercise
- A mediterranean style diet
- Learning a new and complex skill like a language or a musical instrument
- Maintaining social contact with others

Further information

Dementia Australia: www.dementia.org.au

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