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.

Gut health: probiotics - save your money

There's endless fascination with the microbiome – that jungle of bacteria, viruses and fungi which live on our skin, in our airways and in our mouths and bowels. In fact, most of our DNA belongs to these microscopic organisms.

The microbiome trains our immune system, keeps our intestines working well and produces messaging molecules that can influence our brain and speed or slow the ageing process. New ways of testing the microbiome using sophisticated genetic analysis (metagenomics) can tell our biological age within five years, whether we smoke, how much alcohol we drink (alcohol is not good for the bugs in our bowel) and what we eat.

What's known is that the more variety in our diet, the healthier our microbiome - variety means lots of vegetables, not a lot of red meat and getting your protein from fish and legumes like chickpeas and lentils – not to mention the bioactive compounds from extra virgin olive oil. The evidence suggests that such a diet also improves your mood and that's thought to be because it encourages bowel bugs which have an anti-depressant effect.

On the other hand, it's known that antibiotics can damage the microbiome which is another reason why antimicrobial drugs should only be used when needed.

It's tempting when you think you've got a problem with your microbiome, that the answer is on the pharmacy shelves in one of the many probiotic products on offer. Sadly, there is almost no evidence of benefit from swallowing these bacteria. The reason is that probiotics have too narrow a range of bacteria and generally ignore the fact that viruses and fungi play a role too.

The evidence still points to the 'pre'-biotic approach being the most effective. Put simply, prebiotics are the foods you eat. A varied diet which includes some fermented foods like yoghurt is what is recommended and can transform your microbiome in a few days.

What's also missed are the social and environmental effects on the microbiome. An elderly person who's lost their partner and is lonely may not exercise (physical activity changes the microbiome), may say to themselves why should I bother cooking for myself, I'll just have a cheese sandwich for dinner. That person may find themselves with a very limited microbiome which has depressive effects on the brain and reduces the effectiveness of the immune system.

So, when thinking about your gut health and microbiome, don't look for solutions in a bottle. It's in life.

Daylight saving – is it good or bad for your health?

With Daylight Saving Time (DST) coming to end last weekend, it's timely we look at the available evidence to determine whether it's good or bad for our health.

When was DST introduced?

DST was originally introduced during World War I as a wartime measure to conserve fuel and energy by extending daylight hours into the evening, reducing the need for artificial lighting.

DST operated nationally during World War I from 1 January 1917 to 25 March 1917 and during World War II for three summers, beginning on 1 January 1942. It was introduced again in NSW on 31 October 1971 after the Standard Time Act 1971 was passed by the NSW Parliament. Now on the first Sunday in October, people living in New South Wales, Victoria, South Australia, Tasmania and the Australian Capital Territory set their clocks forward by one hour to extend daylight hours after the working day. On the first Sunday in April, we set them back.

If you look at a world map, tropical regions have generally never had daylight saving and many other parts have stopped using it. Australia, New Zealand (which has probably had the longest continuous experience of DST), Europe and North America still put their clocks forward in spring and back in autumn.

The great debate

There are fierce debates about daylight saving in Australia. Western Australia, Queensland and the Northern Territory don't have it. They claim that longer days in hot summers is oppressive, and farmers generally dislike the change in routine. Eastern and more southern states like the lifestyle benefits of being able to get outdoors or go to the beach after they come home from work.

Opponents of daylight-saving claim it's bad for your health. So, what's the evidence?
It swings about and is complicated by the effects of more hours of sunlight in summer and fewer in winter.

There's some evidence of a small increase in heart attacks in the week after the clocks go forward in spring. Out of hospital cardiac arrests also go up after the spring shift but they go down after the autumn clock change, tending to balance it out. There is some evidence of injuries due to human error, but it may be more that the real shift is in time of day when injuries occur.

On the positive side, physical activity levels go up in areas with daylight saving.

So, the bottom line is that depending on your personal opinions for or against daylight saving, you can find evidence to support your position.

Chronic back pain - what works?

Most of us will have an episode of acute back pain in our lives and in some of us, the pain will last for weeks and months. The discomfort is such that you want something done about it and the professionals you see want to help you. Which is why various therapies and interventions are on offer.

A review of the available evidence from randomised trials has looked at the outcomes in people the back pain that's gone on for at least three months where the cause wasn't an infection, cancer or say an autoimmune disease. The pain could either be confined to the back or radiating down the leg. The studies involved nearly 8000 people across 13 procedures or combinations of procedures.

Let's start with people whose pain was confined to the back. Injections of local anaesthetic into the epidural space around the spinal column had little or no effect, nor did epidural local anaesthetic with steroids, epidural steroids by themselves, targeted injections of steroids or local anaesthetic into the joints around the spine. Local anaesthetic injections into the muscles appeared to make the pain worse and trying to destroy the nerves (radiofrequency ablation) to the joints was of little help.

With pain that was going down the leg, the lack of beneficial results was similar, including one targeted at the roots of the nerves in the spine called radiofrequency dorsal root ganglion which tries to change the way the nerves transmit their messages.

It is possible that there are small groups of people who will benefit from one or another of these procedures, but the research wasn't able to identify who they might be. The problem for the person with chronic back pain is that these interventions are not harm free, may involve travel to a specialist centre and cost you a lot of money. The risks include worsening pain, nerve damage and infection.

Yes, it's frustrating but the thing to be aware of is that this isn't the first study to show that these injections don't work, yet they continue to be offered.

So, what does work? Well in many people the pain will go after a few months no matter what you do, including spinal surgery which has doubtful evidence of benefit in most people. There is some evidence that Pilates and the McKenzie method from well-trained clinicians can help restore function and reduce pain and at the very least keep you in some shape to assist with recovery. Opioid pain killers do not help chronic pain and can be disastrous if they cause addiction.

Acai berries – touted as a wonder food but there may be cheaper equivalent or better alternatives.

Acai berries are everywhere. Your gym might offer acai shakes. Your favourite café almost certainly has acai bowls on the menu somewhere. It's definitely a thing. People love acai and fork out serious money for their daily hit. The Australian Financial Review estimated that acai is a $750 million market.

Acai is marketed as hotching with bioactive compounds like flavonoids, anthocyanins and polyphenols which reduce biological rusting (oxidative stress) and have other beneficial effects on the body, which indeed they do. But acai berries aren't the only source.

The acai berry comes from a tropical palm tree native to the Amazon and most of the world's supply originates in Brazil, where there have been accusations of using child labour on the plantations. Acai usually comes as pulp or powder.

So here are a few caveats which might - in addition to the allegations of child labour, might make you pause for thought.

One is that any agricultural product varies in content according to changes in climate, soil quality, harvesting and transportation times before freezing. So, what's on the packet may not reflect what you're eating on that day. But that's true of most fruits and vegetables.

You're not doing yourself any harm with an acai breakfast assuming you're not loading up on sugar and refined carbs in the bowl along with the berries. The question is whether acai berries are any better than other dark red or purple berries. And the answer may be no. Comparative analyses from reliable labs suggest that in fact blueberries may have a wider range of anthocyanins and raspberries and blackberries may have more bioactives as well.

The point is you will probably gain the same benefits from these berries at a lower cost. But hey, they're not as exotic, are they?

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