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.

Does high-intensity exercise boost memory function?

It's the in-vogue form of exercising, and now another study suggests it has benefits over and above the everyday activities of jogging, swimming or cycling. High intensity interval training (HIIT) is characterised by periods of intense physical exercise, interposed with short periods of relaxation.

A new study explored the long-term effects of HIIT on learning and memory in healthy, elderly people.

194 participants aged 65 to 85 were randomly put into three groups based on exercise intensity: low-intensity training (LIT), medium-intensity training (MIT), and HIIT.

Over six months, each group attended 72 supervised exercise sessions. Cognitive testing was conducted monthly, focusing on hippocampal function (the part of the brain that manages memories and keeps people from forgetting them) and MRI scans were taken at several time points to measure brain volume and connectivity. Blood samples were also collected to analyse biomarkers associated with brain health.

Results showed that only the HIIT group experienced significant improvements in hippocampal-dependent cognition and that these persisted for years. It wasn't that low and medium levels of physical exercise were bad for you. They helped to maintain cognitive function, and of course they'd also have flow-on benefits such as heart disease and cancer prevention.

But it was only the HIIT users who saw an improvement in their hippocampal function. MRI data revealed that HIIT halted age-related brain volume loss, particularly in the hippocampus, and enhanced functional connectivity between neural networks. HIIT also correlated with beneficial changes in biomarkers linked to improved cognitive function.

The study underscores the importance of exercise intensity in cognitive health, suggesting that HIIT can protect against hippocampal decline in ageing. It also identified potential biomarkers, like BDNF and cortisol, which could help tailor exercise programs for cognitive improvement.

These findings offer a promising non-invasive strategy to counter cognitive decline, suggesting the long-term benefits of high-intensity exercise.

Further information

Long-Term Improvement in Hippocampal-Dependent Learning Ability in Healthy, Aged Individuals Following High Intensity Interval Training: National Center for Biotechnology Information

Getting more people into bowel cancer screening

Bowel cancer is a leading cause of cancer-related deaths, claiming the lives of 5,350 Australians every year (103 a week). That number is even more tragic because many of these deaths could have been prevented through early detection.

The National Bowel Cancer Screening Program (NBCSP) is designed to detect bowel cancer in the general population. Eligible Australians aged 45 to 74 can do a free test at home every two years.

It only works of course if people participate, and the rates of uptake have been lower than desirable.

A study examined the long-term screening habits of Australians who received invitations to screen between 2006 and 2022, focusing on how consistently individuals participated over several screening rounds - which may provide clues as to who should be targeted and how to improve screening rates.

Researchers gathered national data on all the people who were invited to participate in the NBCSP at least once between August 2006 and March 2022. They analysed those who had been invited four times to understand how many consistently participated, how many skipped some rounds, and how many never participated. The study also explored whether past participation could predict future screening behavior.

During the study period, over 8.5 million people received at least one invitation to screen. Out of these, just over half completed at least one screening test. Among the 2.5 million people who received four invitations, a quarter consistently participated in all four rounds, while around 40 per cent never participated, and the remaining participated inconsistently. Importantly, people who had consistently participated in previous rounds were far more likely to continue screening. For example, among those who had completed all three prior screenings, 89 per cent participated in the fourth round. In contrast, only 9.5 per cent of those who had skipped all previous screenings took part in the fourth round.

This indicates that reinforcing the importance of regular screening after someone has initially participated could help improve long-term adherence to the program.

The authors suggest that targeting people who miss screenings, especially those who have skipped their most recent invitation, with tailored reminders or interventions could boost participation rates. They say that these insights are critical for developing strategies to increase screening rates in the NBCSP, ultimately saving more lives through the early detection of colorectal cancer.

Use your Tonic TV to remind patients about bowel cancer screening

If your practice has a Tonic TV, we can help you promote screening and other services.

You have access to 3 minutes every hour to promote your practice using either static slides or supplying us with videos of a 30 or 60 second duration.

A slide appears on screen for 15 seconds and can promote important information such as:

- Operating hours
- Services offered such as screening
- Local health updates
- Seasonal vaccination reminders
- New staff
- Special events and clinics

We can create the slides for you. Simply contact us with the information you'd like to share on screens, and we will design slides to promote your practice.

Further information
Longitudinal screening adherence in the Australian National Bowel Cancer Screening Program from 2006 to 2022: ScienceDirect

www.bowelcanceraustralia.org/

Is lifestyle therapy helpful for depression?

Depression affects 1 in 7 people in Australia. Good nutrition, physical activity and having someone you can reach out to are all important when someone is depressed. How do these lifestyle interventions compare though, and which are the most important?

A new study looked at the effectiveness and cost-efficiency of remote-delivered, online lifestyle therapy (focused on nutrition and physical activity) compared to traditional talking therapy (in this case, cognitive behavioural therapy or CBT) for reducing depression. The goal was to determine whether lifestyle therapy could be as effective as psychotherapy.

Researchers conducted a randomised controlled trial involving 182 adults with symptoms of depression. Participants were randomly assigned to one of two groups: one received lifestyle therapy (led by a dietitian and exercise physiologist), while the other underwent psychotherapy (led by psychologists). Both interventions were delivered via video conference for 90 minutes. There were six sessions over two months and the primary outcome measured was depression severity.

Both groups experienced significant and similar reductions in depression over the eight weeks. The study found no significant differences between the two, indicating that lifestyle therapy was similar to psychotherapy. Cost-wise, delivering lifestyle therapy was slightly cheaper, primarily because dietitians and exercise physiologists are paid less than psychologists, but generally the health and societal costs were comparable between the two approaches.

The results suggest that lifestyle therapy could be a viable alternative to psychotherapy for treating depression, particularly in situations where access to psychological services is limited, such as rural areas.

If replicated in larger studies, this approach could help reduce the burden on the mental health system by expanding the types of professionals able to deliver effective treatment for depression.

Further information

Clinical and cost-effectiveness of remote-delivered, online lifestyle therapy versus psychotherapy for reducing depression: results from the CALM non-inferiority, randomised trial: The Lancet

Hepatitis E virus: it's time to pay closer attention

According to the World Health Organisation, viral hepatitis infections claim the lives of 3,500 people each day worldwide. One of the lesser-known kinds is hepatitis E.

Infection can occur after eating or drinking contaminated food or water in less developed countries, or consuming undercooked pork products in Australia.

Diagnosis is based on symptoms and confirmed by a blood test showing antibodies to hepatitis E.

Most people recover within four to six weeks of contracting hepatitis E. It can be particularly serious for pregnant women, especially during the third trimester, and for people who have existing chronic liver disease.

Dr Richie Madden is co-founder of Hepatitis E International Direct-Action Group. He is based at the Royal Adelaide Hospital and has been looking closely at the disease for 15 years. He recently told ABC Radio National's Health Report that it's an emerging threat here in Australia, and we should be paying more attention to it.

"I believe it should be part of the acute liver screen for cases of unexplained hepatitis. For liver inflammation and the liver blood test, we typically test for A, B and C…. I think here in Australia we should test for E, A, B, C."

What are the symptoms of hepatitis E?

According to NSW Health, the symptoms of hepatitis E include:

- loss of appetite
- nausea/vomiting
- tiredness
- abdominal/gut pain
- fever
- dark urine/pale stools
- joint pain
- yellowing of skin and eyeballs (jaundice)

Symptoms normally start 3 to 6 weeks after the infection. For some people, symptoms may occur anywhere from 15 to 64 days after infection.

How is it treated?

There is no specific treatment or commercially available vaccine in Australia for hepatitis E. Prevention is the most effective way to protect you from hepatitis E.

Further information

Hepatitis E fact sheet: NSW Health

Hepatitis E - including symptoms, treatment and prevention: SA Health

Hepatitis E: a neglected virus: The Lancet

Health Report: ABC Radio National

*Drs Norman Swan AM and John Aloizos AM