

Seven tips for targeting inflammaging and promoting a longer healthier life

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By 2050, it is predicted that one in four people in the UK will be aged 65 years or over. We have seen increases in lifespan over the last number of decades; however, this is not necessarily complemented by increases in

health, which is increasing strain on health and social care services.

When we get an infection, injure or damage our bodies, we see an acute inflammatory response as part of our fundamental defense mechanism.

Aging at a physiological level is where there is a chronic state of elevated inflammation around the body. We call this inflammaging and it is recognized as a factor in accelerating conditions such as heart disease, dementia, loss of muscle mass and increase risks of infection. Simply put, inflammaging is the biggest predictor of health conditions and mortality in [older people](#).

Healthy aging is a growing term that stems from factors including genetics and changes that we can all make to lifestyle and our environment. We can all make active decisions now that may affect inflammaging and may pay dividends in later life, as well as in the here and now. Here are our top evidence-based tips to slow inflammaging.

1. Move more

Adults are recommended to do at least 150 minutes, or 2 and a half hours, of some form of aerobic activity each week. Fewer than 10% of UK adults over 65 are.

Our own work at the Institute of Inflammation and Aging at the University of Birmingham has found that there are powerful anti-inflammatory effects of performing regular aerobic exercises throughout adulthood, and moderate amounts of exercise can help adults to maintain a healthy weight.

As well as traditional 'exercise', we can also take efforts to reduce sedentary activity by having reminders to move regularly, chose standing desks at work to break up long periods of time sitting, and other small

'hacks' to keep active through the day.

2. Maintain a healthy weight

Excess fat in the body is a key driver for inflammation.

Adipose tissue is an endocrine organ and a primary source of pro-inflammatory cytokines, such as IL-6, TNF α and CRP, released by infiltrating immune cells that display a pro-inflammatory senescent phenotype.

By moving more (see 1) and following a diet with lots of fruits, vegetables and unprocessed food (3 and 4), we also give our bodies more chance to convert excess fat in our bodies into energy and avoid storing surplus energy in the form of fat.

3. Eat more fruit and veg

Fruits and vegetables have two main positive effects for inflammation.

First, foods higher in fiber and with low nutrient densities are more filling and can help us feel full without consuming a surplus of calories that can lead to storage as fat, which can help us to lose weight.

Second, studies have shown that adherence to a Mediterranean diet with an emphasis on high consumption of variety of fruits and vegetables, including certain [green leafy vegetables](#) such as spinach and kale, has a wide range of health-promoting benefits. Recent evidence from a 1-year Med-Diet intervention study in older adults reported a reduction in inflammatory markers (CRP, IL-17) and reduced risk of development of chronic diseases.

Fruit and vegetables contain lots of helpful micronutrients, fiber and help us to feel full without overloading on the calories.

4. Watch levels of ultra-processed food

Ultra-processed food can be very calorie dense as well as being high in salt, sugar and trans fats, and are best reduced in our diets.

Combined with eating more non or minimally processed foods such as fruits and vegetables, trying to reduce the amount of foods commonly referred to as 'ultra-processed foods' is a helpful way to reduce pro-inflammatory stress in the body caused by excess fat. UPFs also contain higher levels of salt which can lead to hypertension, and many convenience foods are low in levels of fiber and some vitamins and minerals which help our immune system.

Limiting levels of UPFs will help reduce the risk of weight gain and having a diet poor in fiber and beneficial micronutrients.

5. Manage stress

Older adults face a lot of stress, and having good strategies for managing stress is key to avoiding hormones that increase chronic inflammation.

Sources of stress can include managing increasing health challenges, bereavement and caregiving responsibilities Prof Mauro has highlighted existing studies on the importance of managing stress as a strategy to combat inflammaging mediated via reduction of cortisol hormone levels which is implicated in storing visceral fat around organs in the body. Studies, including from the Mauro's group, have shown that visceral fat, which may not be as obvious, is a significant factor in chronic pro-inflammatory responses.

Strategies can include participating in social exercise or exercise spent outdoors, mindfulness techniques, as well as connecting with others.

Managing stress is hugely beneficial for getting good sleep too, and helps keep hormones that support our immune system in check.

6. Connect with others

Connecting with friends, family and communities is a powerful tool for tackling social isolation, which is one of the biggest factors associated with stress and inflammation.

The Blue Zones study showed that successful centenarians live in families and communities that put them first. This means keeping aging parents and grandparents nearby or in the home. They commit to a life partner and invest in their children with time and love, which in turn often results in close families caring for aging parents when the time comes.)

7. Consider supplements

Growing evidence points to some dietary nutrients that have an anti-inflammatory impact.

Dr. Duggal highlighted recent evidence in support of the role of many dietary nutrients, such as Omega-3 polyunsaturated fatty acids, Curcumin (found in Turmeric), Resveratrol (found in red berries and grapes) and consumption of Vitamin C, Vitamin D, Magnesium and Probiotic supplements all have the potential to reduce inflammation.

Following a balanced diet high in fruits and vegetables will help us to consume many of these nutrients, but some people might benefit from

additional supplementation.

Although we cannot stop aging, we can make the later years healthier through simple lifestyle changes for supporting well-being, independence and boosting quality of life in older adults.

Provided by University of Birmingham

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