

Weekend

The longevity plan

**How to reverse
your biological age**



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Prue Leith:
'I don't have
time to bake'

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The longevity rules: What to do for a younger body — and brain

Neuroscientist Dr Julia Jones spent two years overhauling her lifestyle. She tells Rachel Carlyle what she discovered

There is no reason why most humans can't live to 100, says Dr Julia Jones, bluntly. The neuroscientist and author is annoyed that on a recent longevity predictor test, her healthy life expectancy came out at "only" 97.

Only a few years ago, before embarking on a two-year lifestyle overhaul based on the latest science, it was 74. Her new book, *F-Bomb: Longevity Made Easy*, the accumulation of the knowledge she gained during that time, encourages us all to gain those extra 20-odd years of healthy life by using her favourite "biohacks"; everything from building up your gut microbiome to having cold showers, or using music to slow your brainwaves. She's only interested in extending healthy life, she stresses. No one wants to live to 100 if they're not in good health.

All her advice is grounded in science, she says, even if many of



Dr Julia Jones, 52
BENJAMIN BOWLES

the experiments have so far only been carried out on mice. "Leading longevity scientists I meet at conferences are already doing these things themselves because they

have conviction that what they're seeing in mice — the reversing of biological age at a cellular level — holds true, even if there have not yet been sufficient human trials,"

Jones says. "We should be able to live healthily to 100 — that's the aim."

Jones, who began her career as a sports and exercise physiologist and psychologist working with Olympic squads, and later studied applied neuroscience at King's College London, has been researching optimum wellness for 30 years. The trouble is, she says, we're mostly doing the wrong things at the moment: prioritising physical fitness over wellness at a cellular level. What's now considered vital for longevity is controlling inflammation in your cells. "Biological ageing is an inflammation-related process, and continuous low-grade inflammation is now known to be at the core of pretty much all our health problems. It happens over decades and is completely invisible until it erupts in physical symptoms that then result in a diagnosis, such as cardio-metabolic conditions, neurodegenerative diseases or cancer."

Scientists have discovered pathways in our cells that help to suppress that inflammation and can slow the ageing process. The key players — or the ones we know about so far — associated with those pathways are the enzymes

AMPK (adenosine monophosphate-activated protein kinase) and mTOR (mammalian target of rapamycin), and sirtuins; proteins that play vital roles in cell repair and cell metabolism. “They’re like the house-keepers who help the epigenome maintain its function — cleaning the cells of waste products, and making sure there’s no damage,” Jones says.

Researchers have found that these pathways are activated when our body faces certain adverse circumstances, which is why you’ll find longevity scientists getting enthusiastic about intermittent fasting, taking cold showers and doing very short bursts of intense exercise. As a result, inflammation in cells is reduced and biological age is lowered.

Jones, who runs Neuron Wellness in Folkestone, Kent, offers clients a GlycanAge test (£289; glycanage.com), a finger-prick blood test that measures glycans; sugar molecules that indicate your inflammatory state. The result is given as a biological age. “In the past week I’ve had a 55-year-old who is very, very fit coming out with a biological age of 76 — he was shocked. He also had a very poor gut health score. I also had a 66-year-old retired vice-president of a



big corporation who came out at aged 80, but after doing my programme for three months he’s down to 71.”

Why would someone who’s physically fit come out with such poor readings? “We’ve put so much emphasis on cardiovascular fitness in the past few decades,” Jones says. She was a sports and exercise scientist in the Nineties and helped to launch a chain of gyms, so advocated exactly that. “But fitness

and wellness are not the same thing. You can be fit but not well, as measured by what state your cells are in.”

Jones offers an eight-week programme to embed the lifestyle changes she advocates; several thousand have completed it online, many as part of corporate sign-ups. Her GlycanAge score is 51, very close to her actual age of 52. Middle-aged women often have high scores, she says, because of the menopause (inflammation can increase due to the decline in oestrogen). It’s why she is desperate for women in their forties and fifties to get on top of their daily habits as early as possible. “Many women I test in their early fifties come out in their mid-sixties unless they’re on HRT, so as someone who is combating declining oestrogen I’m pretty happy with a score of 51.”

Jones is an exceptionally good advert for everything she preaches. She weighs the same as she did in her twenties, having dropped a stone as a by-product of changing her habits, and hopes that next time she tries the longevity calculator (at apps.bluezones.com) she’ll get to 100.

These are the key habits she recommends — but don’t start them all at once, she advises. “Start with

one, then once you’ve nailed that in place as your new normal, choose another, then another . . .”

Delay having breakfast until 11am

This is the most significant change of them all, Jones says. Extending your overnight fasting period to 16+ hours can help to maintain healthy insulin sensitivity. It’s also mimicking the kind of adversity our body needs to trigger the cellular response that is key to longevity. “You’re activating those three pathways which keep the cells clean and operating well. If you’re eating dinner at 8pm and getting up at 6am or 7am to eat breakfast, you’re never in the fasted state that allows that process to happen. Humans never used to eat this often — our ancestors weren’t munching all day long.” Jones eats within an eight-hour window Monday to Friday and relaxes it at the weekends. Having your window from 7/8am to 3/4pm also works but is harder to achieve.

Don’t drink alcohol less than three hours before sleep

This is to preserve and improve the quality of sleep, a key to longevity. “If you have any kind of sleep monitoring device you can see that when you drink at night you tend to go into a deep sleep, but it’s not

natural sleep,” she says. “You’re increasing the levels of the brain chemical GABA — essentially putting the brain to sleep. That fake sleep isn’t healthy and it disrupts the quality.” Jones says she doesn’t tend to drink during the week and no longer drinks to unwind late in the evening.

Persevere with kombucha and kimchi

A diverse gut microbiome is associated with healthy ageing, although scientists aren’t yet sure of all the mechanisms at work. Some studies have shown that exceptionally long-lived people have particular anti-inflammatory metabolites in their blood that are produced by gut microbes. Certainly, a lack of diverse gut bacteria is linked to inflammatory diseases, which shorten life, and a small study at Stanford University in the US last year showed that a diet rich in fermented food (which contains live bacteria) increased microbiome diversity and reduced inflammatory proteins.

“I wasn’t a fan of fermented foods when I first tried them, but it’s worth persevering as I now love them,” Jones says. “Many people tell me they don’t like kombucha [fermented black tea] but



Two-minute cold showers every day
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manufacturers have worked really hard to improve the flavour profiles without destroying the probiotic health benefits.” The brave, she says, can also try kimchi juice and sauerkraut juice (available online); some blue cheese is also fermented, as is miso. She points out that if sauerkraut is on the supermarket shelf rather than in the fridge section, it probably won’t contain sufficient bacteria to be counted as a probiotic.

Music keeps your brain young

Listening to loud music stimulates the nervous system when it

produces “the chills”, and when experienced with others you get the added longevity benefit from social interaction. Listening to music before bed can slow down breathing and improve sleep quality. “Our brainwaves synchronise to musical rhythms, which makes music a great metronome, enabling us to influence the release of brain chemicals and the activation of brain networks,” Jones says. “And of course, learning a musical instrument is proven to be one of the best ways of slowing cognitive decline and building new brain connections. Music really is a super-

tool.”

Eat 30 different plants each week

This recommendation came out of the British Gut Project and its American counterpart; your 30 include fruit, nuts, vegetables, beans, seeds, grains, herbs and spices. “The research found people who were eating at least 30 different types of fruits and vegetables a week had a significantly lower rate of chronic disease,” Jones says. She points out that our forager ancestors had much more diversity in their diets than we do today, when 90 per cent of the world’s food intake is provided by just 15 crop plants. “Now we shop by checking what we’ve run out of and buy the same thing again. People sometimes find the idea of 30 mind-boggling but it’s actually quite easy to do when you are adding things to soups and roasting a load of vegetables in the oven. You don’t need tons of each veg — you can have less of each but more types. So I don’t have fish and a vegetable for dinner; I might have a mix of eight vegetables with my fish.”

Take a biomarker test

These are becoming increasingly affordable and can measure anything from your inflammation levels or cortisol (the stress

hormone) to blood sugar. But the one Jones rates highest is a gut bacteria test. “The gut microbiome underpins so much — mental health and pretty much all chronic disease — because it’s a dominant part of the immune system, and if that’s not operating optimally inflammation is rampant.” A basic test, costing about £80, will give an indication of how efficiently the gut microbiome is functioning. But if you want a detailed profile of your gut bacteria, possibly with specific food recommendations, expect to spend £150-£300. You’ll end up with a percentile figure showing the variety of different microbes in your gut; all kinds of things can reduce diversity. Jones says hers plummeted after a course of antibiotics for a tooth infection in 2020 (it took three months to rebuild).

Run really fast up the stairs three times a week

It doesn’t have to be the stairs; the idea is to exercise to the point where you can’t carry on a second longer. These really short bursts of intensive activity can activate the anti-inflammatory pathways that are the key to longevity. For some people that might be 20 seconds, for others longer. “It doesn’t really



Dogs boost health
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matter as long as you get to fatigue,” Jones says.

At her centre in Folkestone she uses an AI bike that will produce this effect in two 20-second bursts of cycling. “If you’re plodding away on a gym treadmill for 30 to 40 minutes, you’re not producing this effect. If you enjoy it, that’s great, but know that it’s not necessarily going to have any impact on when you’re going to be diagnosed with your first chronic disease.”

Do the daily gratitude thing — but don’t stress about it

“Gratitude is an easy way to boost positive brain chemicals and produce a calming effect, activating the parasympathetic nervous system — the rest and repair branch of our autonomic nervous system that stems the release of stress chemicals,” Jones says. “I sit with

my dog Charlie for my first coffee of the day and list the good things in my life. Some people worry they have to come up with a different list every day but it doesn’t really matter what you’re being grateful for. As long as you’re doing it intentionally and not running through in your head all the things you need to do when you get to the office, it still has that benefit.”

Another technique is to have periods every day when you slow your breathing and exhale longer than you inhale.

Turn your shower to cold before getting out

This is an easy — if a little painful — way to activate those longevity pathways by temporarily stressing your body with cold exposure. It’s why longevity scientists are usually big fans of ice baths and cryo-chambers. “Turning your shower to cold for just a couple of minutes before getting out is a cheaper and easier way to get the benefit,” Jones says. “The trick is not to stand there shivering, which is the natural response as emergency signals are sent to the brain and the sympathetic nervous system — the fight-or-flight response — kicks in. You need to keep control of your breath, slow it down and extend the

exhale, and at the same time rub your skin to send touch signals to the brain.” Exposure to high heat, such as in a sauna, works too.

Spend time with friends — and dogs

“Oxytocin is now thought to be one of the most powerful longevity chemicals and you get that from being among friends, being in a loving relationship and spending time with your pets,” she says. “When dogs and their humans gaze into each other’s eyes the oxytocin levels in both parties can rise significantly. Oxytocin has a calming effect and can reduce feelings of fear, loneliness and anxiety and the underlying chronic release of harmful stress chemicals.”

Our friends and families deliver health benefits too. “Interaction and social contact give our brains an extensive workout as well as helping to boost positive brain chemicals such as dopamine and serotonin. Having fun and being social is a hugely important part of health and is often overlooked.

“Incidentally, pets are very good for the gut microbiome too, because you’re exposed to extra bacteria.”

F-Bomb: Longevity Made Easy is out now (This Day in Music Books, £12.99); neuronwellness.com ■