

DR MICHAEL MOSLEY, who died last week, will be fondly remembered for his popular TV programmes, his best-selling books, podcasts and his regular weekly column in this newspaper.

But perhaps his greatest skill — and his lasting legacy — will prove to be his ability to distil complex scientific concepts into simple, actionable tips that everyone can understand and might be tempted to try.

Michael tirelessly championed health and longevity and his suggestions were always backed by solid, evidence-based research (or the sometimes bizarre experiments he conducted on himself).

He was a passionate advocate for encouraging people to take responsibility for their own health and he steadfastly believed that small lifestyle changes can magnify and grow to create a big impact.

There is no doubt that his advice helped to improve many lives, so here, in the first of a three-part tribute series which will run today, in tomorrow's Mail on Sunday and in Monday's paper, are 160 of the life-changing tips he gave the nation, in his own words, starting with his ground-breaking approach to weight loss.

NO NEED TO DIET EVERY DAY

THE idea you don't need to cut calories every day to lose weight was revolutionary when the 5:2 was introduced in 2012. Fasting for two days a week and eating normally for five evolved into the Fast 800 Keto, which incorporates the same key principles but encourages a 3:4 split, where you 'fast' (800-1,000 calories a day) for four days and eat healthily for three.

If you have a lot of weight to lose — or you are hoping to reverse a diagnosis of type 2 diabetes — Fast 800 Keto works best with a fast-track weight-loss period of 800 calories every day. But at the heart of the concept is the classic intermittent fasting which makes the plan much easier to keep going long-term.

Most people find they can happily stick to the calorie restriction during the week if they can relax the rules slightly (by increasing portion sizes and introducing healthy carbohydrates) over a long weekend.

Today, the Fast 800 Keto is regarded by the medical profession as an excellent way to lose weight and improve health, including helping those at risk of type 2 diabetes improve their blood sugar levels.

GO FOR TWO MEALS INSTEAD OF THREE

YOU can speed weight loss and improve blood sugar and cholesterol levels, cut your risk of type 2 diabetes and even slow age-related decline in brain health by incorporating Time-Restricted Eating (TRE) into your life. This is a form of intermittent fasting in which you eat your day's meals within a narrower time window.

Aim for a 12:12 pattern (eating all your meals within a 12-hour window). Some people find two slightly larger meals each day can be more convenient and satisfying than three smaller meals. One popular pattern is having a late breakfast, skipping lunch, then eating an early evening meal.

TEACH YOUR BODY TO BURN FAT

BY ENSURING your calorie allowance includes plenty of protein (meat, fish, eggs), healthy fats (olive oil, nuts) and not many carbohydrates, you can create the ideal conditions for your body to go into a state of 'ketosis'. This is when it releases compounds from your fat stores and converts them into chemicals called ketones which can be used as fuel.

Amazingly, ketosis doesn't just mean you're burning fat, it also promotes the release of hunger-suppressing hormones.

160 life-changing tips that Michael Mosley gave the nation and how they can transform YOUR health

In a major new series to mark his great legacy, here's the very best of Dr Michael Mosley's science-backed advice, starting today with his tried-and-tested approach to weight loss

MAKE SURE YOU PRIORITISE PROTEIN

FOR effective weight loss you need to ensure you are eating plenty of good quality protein (meat, fish, eggs, nuts and seeds,

and dairy products). Protein is essential for producing hormones, it helps with the repair and maintenance of a healthy immune system and we need it to build muscles, enzymes and much of the infrastructure of our bodies.

But many of us aren't eating enough. In fact, research shows lack of good quality protein in our diet could explain why we are getting fatter. Australian researchers have discovered that we have a specific appetite for protein and

when the protein content of the food we eat is too low, we are compelled to go on eating until we have satisfied that protein need.

■ IF YOU are sticking to an 800-900 daily calorie limit, aim to eat at least 50g of protein a day.

■ ON NON-FAST days when you don't need to count calories 60-80g of protein a day is advised, and closer to 100g for the elderly, as they absorb less protein.

■ WHEN aiming to maintain weight loss you can achieve optimal health and prevent weight gain by eating 1g of protein per kg of body weight (so, if you weigh 80kg, that's 80g of protein a day).

IF YOU'RE VEGAN, SHUN FAKE MEATS

IF YOU are vegan, be clever in your protein choices, as many

TWO APPLES A DAY MELT POUNDS AWAY

THE nutritious compounds in apples could aid weight loss.

One U.S. study found women given 75g of dried apple every day (equivalent to two fresh apples) for six months reduced their cholesterol levels by 23 per cent, and, despite the extra calories, the apple eaters lost 1.5kg — just over 3lb — in weight, too. The benefits are thought to lie in

the combination of fibre and flavonoids which are produced by plants to protect them from sunlight and disease. These can be found in or just under the apple's skin — so eat unpeeled for top health benefits.

Apples have been shown to cut the risk of diabetes. They also contain health-boosting vitamins C and K, plus minerals like copper and potassium.



Measuring up: Dr Mosley famously lost 20lb and reversed his own type 2 diabetes

MONITORING YOUR PROGRESS WILL KEEP YOU MOTIVATED

1 MEASURE your waist. Put a tape measure just above your belly button and breathe naturally (don't hold your tummy in!). Repeat every two weeks (at the same time each day) to check your progress. If you don't have a tape measure, cut a length of string to your height, fold it in half, then see if it fits around your tummy. Your waist should, ideally, be less than half your height.

2 TAKE your blood pressure — if you are hypertensive your blood pressure should start to come down when you lose weight.

3 TAKE a photo. You will want to show people the 'before' and 'after' in a few weeks' time and you'll kick yourself if you haven't got photographic evidence.

4 KEEP a diary of your progress and log the main reasons why you want to lose weight (it's good to flick back to whenever you feel yourself wobbling).

5 GARNER support — tell family of your plans and reasons for losing weight. Making a commitment means you're more likely to stick to it, and people are less likely to offer you 'treats'.

'fake meat' products are not only low in protein but come with hidden carbohydrates which would kick you out of ketosis. Instead focus on high-protein foods such as tofu, tempeh (which has more protein than tofu — almost 25g in one serving), edamame beans and seitan. Putting two big spoonfuls of nutritional yeast in soups and sauces can add an extra 25g of protein. Vegan protein powder will boost your intake, too.

SILENCE THOSE HUNGER PANGS

■ PLAN activities or exercise sessions for key craving trigger points in your day to distract from the potential diet-breaking 3pm energy slump and munchies.

■ SIP a cup of black tea, herbal tea or coffee with a splash of almond milk (which is lower in carbohydrate than cow's milk).

■ JUMP on the scales — your weight loss will motivate you. People who weigh themselves daily are, on average, 6.5kg lighter than those who weigh themselves monthly.

■ REMIND yourself why you are trying to lose weight: you want to live to a healthy old age, don't you? Free from disease, fit and happy, able to bend down and do up your own shoelaces?

PILE ON THE VEGETABLES

AIM to pile half your plate with non-starchy vegetables such as spinach, cabbage, kale, pak choy, courgettes and broccoli, or salad. These are low in calories and the fibre acts as a brake on your appetite and feeds the 'good' bacteria in your gut, so they can work hard to keep your brain and immune system in good shape.

STOP SNACKING, IT PILES ON THE POUNDS

CONTRARY to what the food manufacturers claim, 'eating little and often' is NOT a good thing. Studies show that regular snacking (the classic 'five small meals a day') is the easiest way to put on weight. The more we snack the more we eat overall.

THREE WEIGHT MAINTENANCE TIPS

1. SERVE yourself smaller portions than you're used to.

2. EAT slowly and mindfully (if you eat fast, you eat more).

3. DON'T be afraid to leave food on your plate.

REMOVE TEMPTATION FROM YOUR LIFE

WILLPOWER is hugely overrated and relying on it is one of the main reasons why so many diets fail. Help yourself by creating an environment in which it is easier to succeed than to fail.

This may mean changing your route to work to avoid passing your favourite coffee shop where you buy your frothy coffee and muffin (a cappuccino and muffin easily adds up to 500 calories).

And it almost certainly means clearing your house of tantalisingly tempting junk food and 'treats'. At the very least, put all the snacks in one cupboard and either lock it and give the key to your partner or put a large skull and crossbones on the door and hope that will deter you.

19 FOODS TO EAT IN ABUNDANCE

THESE foods are packed with nutrients and fibre and should form the basis of every healthy meal. Eat them freely without counting calories at any stage of your weight-loss journey. You can drizzle them with a little extra-virgin olive oil or scatter with grated parmesan cheese.

Leafy green veg: Spinach, kale, cabbage, broccoli, cauliflower, Brussels sprouts, chard, spring greens, pak choy, cavolo nero, green beans, mangetout, courgettes.

Salad: Lettuce, rocket, endive, cucumber, tomatoes, peppers.

THREE WAYS TO DRINK MORE WATER

WATER is your weight-loss friend and staying hydrated is key to minimising 'carb withdrawal'. You should be drinking enough fluid so that you are going to the loo to wee at least 6-7 times over a 24-hour period.

Any time you feel tempted to eat a snack, have a glass of cold

TURN OVER FOR MORE MOSLEY WISDOM

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water and wait ten minutes. The cravings will pass.

1. TAP water is more enjoyable if you keep a jug cooled in the fridge.
2. ADD slices of lemon to jazz it up.
3. AIM to drink a big glass of water when you wake up in the morning, a big glass mid-morning and a glass with each meal.

TEN TIPS TO SURVIVE A DINNER PARTY

1. LET your hosts know beforehand that you are following a healthy eating plan, to minimise undue pressure on the day.
2. OFFER to bring a dish and make a huge, healthy salad to share.
3. BRING fizzy water to drink.
4. TIME your previous meals so you don't arrive hungry.
5. DECLINE alcohol.
6. DO NOT touch the nibbles. Not even one crisp. Avoid standing near them.
7. MAKE a healthy selection from the food, basing your meal on protein and green leafy vegetables or salad.
8. HAVE a well-prepared 'speech' ready for anyone who tries to persuade you that dieting is pointless.
9. IF CRAVINGS strike, take a moment to run through a quick deep-breathing exercise.
10. REMIND yourself, these get-togethers are all about the people, not the food.

TEN WAYS TO IGNORE RESTAURANT TEMPTATIONS

1. CHECK the menu online if you can and decide what you plan to order.
2. ASK for extra salad or extra green vegetables in place of potatoes or rice.
3. TIME your other meal or meals that day so that you are not starving hungry when you go out.
4. OFFER to be the designated driver so you have an excuse not to drink.
5. ASK for tap water for the table and keep drinking throughout the evening.
6. REFUSE bread and breadsticks.
7. IF EVERYONE is ordering a starter, ask for a simple green salad.
8. IF YOU can't find a healthy main meal, order two starters instead.
9. EAT slowly, putting your knife and fork down between every mouthful.
10. SKIP dessert.

13 WAYS TO MAKE YOUR DIET MEDITERRANEAN

THE Mediterranean diet is widely seen as one of the healthiest on the planet and studies show the combination of fresh real foods is optimal for health and weight loss. Maximise your 'M score' by following these guidelines:

1. USE olive oil for cooking and salad dressings.
2. EAT more than two portions of vegetables a day (not including potatoes).
3. EAT two or more portions of fruit per day.
4. EAT less than one serving of processed meat (ham, bacon, sausage) per day.
5. HAVE plain yoghurt three or more times per week.
6. THREE or more servings of legumes per week.
7. THREE or more servings of wholegrains per week.
8. EAT oily fish or shellfish three times per week.

9. EAT cakes and biscuits less than three times per week.
10. EAT a serving of unsalted nuts three or more times per week.
11. COOK with garlic, onions and tomatoes three times a week.
12. SIT at the table to eat at least twice a day.
13. DRINK fizzy drinks less than once a week.

HARNESSING THE POWER OF PROTEIN AND BEATING THOSE SUGAR CRAVINGS

DR MICHAEL MOSLEY shared advice with Daily Mail readers every week in his Saturday column, including these tips on the best ways to boost weight loss.

SIX WAYS TO GET MORE PROTEIN INTO YOUR DIET

- START your day with eggs (6g of protein per egg).
- ADD smoked salmon or a couple of bacon rashers to two eggs and that will push you up to 30g.
- OR YOU might opt for kippers for breakfast. A small kipper, around 100g, will give you 25g of protein.
- GREEK yoghurt is also a good way to top up protein levels, particularly if you add nuts. A small serving (200g) with nuts will deliver around 25g of protein.
- FOR lunch, or your evening meal, your best bet for a protein boost is meat or fish, with a palm-sized piece of either delivering about 30g of protein.
- IF YOU'RE a vegetarian, then beans and lentils are a protein-packed option. One cup (200g) of cooked lentils provides around 20g of protein. And tofu, which is a great meat substitute, gives you about 18g of protein per 150g.

FOUR WAYS TO KEEP BLOOD SUGAR LEVELS STABLE

- DELAY drinking coffee until an hour after waking. A couple of hours before you wake up, your body releases a big shot of the stress hormone cortisol to get you ready for the day ahead and one cup of coffee (even taken black and without sugar) can boost that spike. Better to delay it until those initial blood sugar levels are falling.
- TAKE a 15-minute walk 60-90 minutes after eating so your muscles use up some of the surplus sugar in your blood.
- DRINK a tablespoon of apple cider vinegar in water before having a sugary snack or carb-heavy meal (the acetic acid in the vinegar slows the breakdown of carbs into sugar).
- COOK, cool and then reheat carb-heavy meals such as rice, pasta and potatoes to change their structure so they become 'resistant' to gut enzymes that break them down, causing a smaller blood sugar surge.

SEVEN TRICKS TO SPEED UP YOUR METABOLIC RATE

ONE reason we are gaining weight is because studies show our metabolic rate (the measure of the amount of calories you burn daily to keep going)

RULES TO KEEP WEIGHT LOSS ON TRACK

- DON'T go back to old eating patterns — 'normal' for you was very probably too much food.
- CATCH weight gain before it escalates. Weigh yourself regularly or put a tape measure around your stomach. It's much easier to catch weight regain before it's



is falling. In fact, over the past 40 years, average metabolic rates have slowed so much that men are burning about 220 calories less a day and women 122 less.

- EAT more meat and dairy products (and fewer ultra-processed foods) — studies show when you reduce levels of saturated fat in the diet, metabolic rate drops, but a ketogenic diet (high in fat and protein) helps maintain metabolic rate.
- TURN the thermostat down. You burn calories keeping your core temperature within a healthy range and your body will produce more metabolically active 'brown fat' which raises metabolic rate.
- DO MORE resistance exercises, such as press-ups and squats, as muscles burn energy even when you are sleeping.
- EAT spicy foods. Chilli is thought to rev-up the body's fat-burning mechanisms.
- DRINK plenty of water to give your metabolism a little boost. The body has to expend energy to warm the fluid to body temperature and water plays an

important role in the way the body burns fat.

■ EAT more protein. This will boost your metabolic rate, as your body uses more energy digesting and absorbing protein than foods that are high in carbs.

■ DRINK green tea. It contains bioactive substances such as caffeine and antioxidants that can boost metabolism and break down fat cells. The caffeine in coffee has a small effect, too.

SIX FOODS TO HELP BEAT SUGAR CRAVINGS

RESEARCH shows a particular type of fibre, called inulin, can reduce cravings for sugary foods because it helps boost 'good' bacteria such as bifidobacteria in the gut which produce the 'feel good' hormone, dopamine.

Inulin supplements of 3g a day are considered safe, but you may experience side-effects such as bloating, diarrhoea, constipation and cramps from such concentrated doses. Instead, you can get inulin from these foods:

- Garlic
- Onions
- Bananas
- Leeks
- Asparagus
- Jerusalem artichokes

gone too far than wait and have a bigger hurdle to jump.

■ ENLIST the support of friends and family. Say: 'It's going to be hard. And there will be times when I'm going to fall off the wagon. But I need you there to encourage me.'

■ ADAPTED by LOUISE ATKINSON from *Fast 800 Keto* by Dr Michael Mosley

(*Octopus*, £9.99). © Michael Mosley 2018.

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IN TOMORROW'S **The Mail** **How to sleep soundly – and tips to pep up your sex life**

Part 2 of our major new series celebrating our much-loved writer and his gloriously simple science-backed advice that transformed Britain's health...

Michael Mosley's life-changing tips on how you can sleep more soundly and pep up your love life

THE massive outpouring of public grief for Dr Michael Mosley has been peppered with heartfelt stories of gratitude from the tens of thousands of people whose lives have been transformed by following his advice.

In tribute to his impact on the nation's health, the Mail has compiled 160 of his most life-changing tips in a three-part series. Today we put the spotlight on sleep and sex.

Like weight loss, sleep held an enduring fascination for Dr Mosley who was tormented by insomnia for nearly 30 years, ultimately resolving his sleep issues through judicious application of his own methods.

Here are his scientifically-backed tweaks to get you sleeping soundly through the night – and some tried and tested ways to boost your libido.

NO MORE LIE-INS

THE single most important change you can make to maximise your chance of getting more deep sleep is to stick to a regular sleep schedule – going to sleep and waking up at the same time every day.

Studies show people with irregular sleep patterns may have a higher risk of dementia and a weekend lie-in will only mess up the body's natural circadian rhythms. This might not be a problem when you're young, or if you are lucky enough to sleep well, but if you're prone to insomnia, this shortfall could be enough to tip you into a run of bad nights.

GO TO BED LATER

IF YOU suffer from insomnia, the time spent in bed awake can be stressful enough to set up a bad pattern of behaviours which puts your brain in stress mode whenever your head hits the pillow.

One of the most effective ways to break this vicious cycle is to spend LESS time in bed. This is called sleep restriction therapy.

The idea is that restricting the amount of time you spend in bed intensifies your urge to sleep, so after a few days of this, when your head does hit the pillow, you drop off quickly into a deep and restorative sleep.

With practice, your brain re-learns to associate being in bed with being asleep, rather than stress about not sleeping.

It's not easy, but it is powerfully effective. Even the most stubborn cases of insomnia can be shifted – often with the support of a sleep specialist.

If you are prone to waking up multiple times during the night, try going to bed an hour later than normal, but make sure you stick to the same alarm call each morning – weekends included – and no napping is allowed.

If, after a week, you are sleeping better, then give yourself an extra 20 minutes in bed.

The mild restriction may be enough to concentrate your sleep 'muscle' allowing you to sleep more deeply with fewer interruptions.

EAT YOUR WAY TO BETTER SLEEP

EMERGING research shows the trillions of 'good' bacteria that live in your gut produce compounds which play an important role in helping you sleep soundly.

● Shift your diet towards a healthier, more Mediterranean way of eating. Switch to using olive oil, upgrade to wholegrains (such as brown rice, wholegrain pasta, seeded wholegrain bread) and snack on nuts not crisps – all of which are fantastic tips for reducing the inflammation that leads to arthritis and other painful

conditions that can keep people awake at night.

● Increase the range and variety of fruit and vegetables in your

diet to feed the 'good' bacteria in your gut which manufacture serotonin. This 'feel-good hormone'

bacteria improves mood, helps regulate appetite, digestion, sleep and sexual desire. Research shows that people with the most

diverse microbiomes have the best quality sleep.

● Cut back on ultra-processed food (UPFs) to reduce your intake of sugar and additives that often contain emulsifiers your gut microbes do not enjoy.

Reducing UPFs will help starve out the 'bad' bacteria which can impair sleep quality by creating inflammation, contributing to anxiety, depression, weight gain and sleepless nights.

● Eat protein (eggs, meat, fish, beans or tofu) with every meal to support the basic functions of the body and improve your chances of a good night's sleep. Aim for a daily target of 1 to 1.5g of protein per kg of body weight per day.

HAVE YOU GOT THE RIGHT TYPE OF PILLOW?

● Your pillows should be soft yet supportive – and should be replaced every couple of years. If you fold it and it doesn't spring back open, then it probably isn't giving your neck enough support

● If you sleep on your back, pick a thinner pillow that doesn't prop the head too high, putting stress on the neck.

● Stomach sleepers need a really thin pillow, or no pillow at all, to ensure the spine stays straight and to minimise stress on the lower back.

● For those who sleep on their side (the most popular position), a standard pillow will do.



10 steps to a dreamy bedtime routine

THE best way to ring-fence good sleep, night after night, is by setting a regular bedtime and creating a wind-down routine you can look forward to each night.

1 Eat your last meal at least three hours before you go to bed so the digestive process doesn't interfere with your core body temperature, which should be starting to fall as bedtime approaches. Late-night eating forces the gut to spring into action, which raises body temperature.

2 Enjoy a ten-minute soak in a hot bath an hour before bedtime. The warm water raises your body temperature, increasing the circulation of blood to your skin, hands and feet. Afterwards, your core temperature will slowly drop over the course of an hour, helping to trigger changes in the brain which induce sleep.

3 Dim the lights around your house a few hours before bed as bright lights can reduce production of the sleep-inducing hormone melatonin.

4 Shun the nightcap. While a few drinks might help you drop off, they will also lead to snoring and more fragmented sleep later on.

5 Listen to mellow music before turning in. Studies have shown that older adults who listen to relaxing music before bed fall asleep faster, sleep longer and wake up less during the night. The ideal sleep-inducing tunes have a slow rhythm of 60 to 80 beats per minute.

6 Put your mobile phone on sleep mode an hour before bed and hide it in a drawer or charge it in another room so you're not tempted to scroll (it's not so much the light from the screen that's the problem as the stimulation from unexpected messages). Remove the TV and any computers. Electronic devices excite the brain just at the point where you need everything to be calm and relaxed.

7 Climb into bed before midnight – your brain gets its deepest sleep during the first half of the night.

8 Check that your bedroom is cool – 18C (64F) helps the hibernation process.

9 If you are a sensitive sleeper (or your partner snores), wear earplugs.

10 Keep a notebook by your bed and before switching off the light each night, jot down a list of everything you need to do the next day. One US study found this gets you asleep nine minutes quicker – a similar impact to taking a sleeping pill. Keeping a journal also appears to reduce the tendency to wake up in the night.

COCOA? IT'LL KEEP YOU UP AT NIGHT

A CUP of hot chocolate or a bowl of cereal just before bed may sound soothing but it is a bad idea. Your pancreas, which produces insulin, will have closed down for the night, so it won't be ready for the big sugar hit that cereal or cocoa will deliver. This will cause your blood sugars to rise and keep on rising into the night, which is bad for sleep as well as for your body. Any protein in the food will also cause your stomach to release acid triggering reflux (heartburn).



genetics and any medication (the Pill can dramatically slow your liver's ability to break caffeine down, for instance).

TAKE NAPS TO BOOST YOUR MOOD AND WITS

NOT only can napping boost mood and wellbeing, but large studies have shown a link between regular napping and good heart health. It can improve your thinking skills and strengthen your capacity to learn. But don't nap if you're trying sleep restriction.

A 20-minute nap pushes the reset button, increasing alertness and attention, as well as sharpening motor skills. Best time is seven hours after waking.

A 60-minute nap gives you enough time to move into 'slow-wave' sleep, which can help to enhance memory.

A 90-minute nap, particularly taken in the morning, gives you access to REM (rapid eye movement) sleep which can enhance creativity.

If you are very sleep-deprived but still need to function, try a coffee snooze: Drink a cup of strong black coffee, set your alarm for 20 minutes' time, lie down and

● Experiment with probiotic foods such as sauerkraut, kimchi and kefir which contain live bacteria to enrich your microbiome. Studies show people who eat fermented foods have lower stress levels and sleep better.

MOVE MORE TO AID DEEPER SLUMBER

AN EARLY morning walk exposes you to bright light. This helps set

your circadian rhythm which means you are more likely to feel sleepy at bedtime

Weight or resistance training will help preserve muscle mass and boost your sleep efficiency. One study showed resistance exercises could increase the amount of good-quality sleep by an average of 40 minutes. Studies also show men who are physically active are less likely to need regular nighttime trips to the loo. Exercise is thought to help by

reducing body size, improving sleep, decreasing nervous system activity and lowering levels of systemic inflammation.

CUT BACK ON CAFFEINE AFTER LUNCH

THE caffeine in coffee, tea, cola and energy drinks perks you up because it binds to sleep-inducing receptors in your brain that would otherwise be occupied by

adenosine – the natural hormone that helps you feel sleepy.

So if you struggle with sleep, cut back to two or three cups of coffee a day maximum – and all before lunchtime.

The average half-life of caffeine is around five hours, which means half the caffeine in a 6pm cup of coffee will be still running around your system at 11pm and you could still be feeling the effects at 4am.

Caffeine sensitivity varies according to gender, age, weight,

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sleep. It takes 20 minutes for the caffeine to hit your brain. You should be buzzing as your alarm wakes you.

HOW TO CALM AN OVERACTIVE MIND

BREATHING exercises help to still your busy mind by forcing you to focus on specific counting patterns as you breathe calmly and deeply. Try these:

● **4-2-4 breathing:** Breathe in deeply through your nose to a count of four, hold for two, then exhale for a count of four. Repeat 10 times.

● **Alternate-nostril breathing:** Breathe out through your mouth and use your right thumb to close your right nostril, breathe in deeply through your left nostril to a count of four, now switch sides and block your left nostril with your left thumb and breathe out to a count of four. Repeat 10 times.

DO YOU REALLY NEED A NEW MATTRESS?

THE life expectancy of mattresses varies considerably, but watch out for sagging, as this can throw your spine out of alignment and affect the quality of your sleep. A mattress topper might provide sufficient cushioning and support and will be much cheaper than buying a new mattress.

WHAT TO DO IF YOU WAKE IN THE NIGHT

WAKING in the middle of the night becomes more common as we get older because we sleep less deeply.

● **Resist the urge to check the time** (it only creates stress).

● **Try 'progressive muscle relaxation':** breathing steadily, first inhale and contract one muscle group (for example make a fist with your right hand) for five seconds, then exhale as you release the tension in that muscle.

As you do so, imagine those stressful feelings flowing out of your body. Relax, then progress around your body from your fingers to your toes, contracting and releasing one muscle group at a time. You should be asleep before you reach your toes.

● **If you find your brain is buzzing** it is important to realise that at night your filters are down and your thoughts will be less rooted in reality than they might be during the day. Try to accept that catastrophising thoughts ('I'll be so tired tomorrow my boss with sack me') are not real. It can help to give negative thoughts a name,

AS A Daily Mail columnist and health writer, Michael Mosley shared many tips to rev up our love lives. Here are just some of them...

● **SWITCHING** to a Mediterranean diet should give your sexual prowess a bit of a boost, as studies show that oily fish, olive oil, garlic and onions help to improve blood flow to the sexual organs and minimise the risk of impotence. In one study, women who consistently ate a Mediterranean-style diet scored higher on desire, arousal, lubrication, orgasm, and satisfaction. Another trial found that men who consumed more fruit, vegetables, nuts, wholegrains and olive oil over a two-year period reported an improvement in erectile function.

● **FOODS** rich in omega-3 fatty acids (such as oily fish) have been shown to help increase testosterone, which is crucial for sex drive and performance. Omega-3s are also believed to help prevent the build-up of plaque in your arteries, which can help to promote blood flow to those all-important areas of the body during sex.

● **EAT** more beetroot - the nitrates in this root vegetable can help lower blood pressure and increase blood flow to the sexual organs. The Romans used beetroot as an aphrodisiac.

● **PISTACHIO** nuts are thought to help lower blood pressure and reduce the risk of heart disease. One study showed men who ate 100g a day for three weeks experienced firmer erections and increased blood flow to the penis.

● **LEAFY** greens such as spinach, kale and Swiss chard are excellent sources of magnesium, which has been

shown to positively affect testosterone levels. One 2011 study showed that magnesium supplements could prompt a testosterone hike.

● **STOP** smoking - cigarettes damage the small arteries and nerves that are so important

for getting and maintaining an erection (40 per cent of regular smokers have problems in this department). Women are also affected because smoking cigarettes can cause circulation problems that can lead to reduced arousal and

intimate dryness.

● **ENJOY** a glass of red wine. A study of 798 Italian women found that those drinking one to two glasses of red wine a day reported greater 'sexual desire' as well as 'overall sexual function'

Take a tip from the Romans... eat beetroot to put lead in your pencil



such as 'Donald'. When they appear you can say to yourself 'oh there's Donald sounding off again'. This sounds crazy, but it works.

● **Try saying to yourself 'I am enjoying being awake, let's see how long I can stay awake for'.** Studies show the 'paradoxical intention' of deliberately trying to stay awake when you are desperate to go to sleep can lead to you falling asleep.

● **Deep breathing exercises** can reduce stress by activating the parasympathetic system which causes your heart to slow and your blood pressure to drop. Start by taking a slow, deep inhale through

the nose, allowing the air to fill your lungs. Hold for a count of two, then breathe out slowly through your mouth.

● **Give yourself a strict 20 minute time limit.** If, after 20 minutes, you are still awake, you should get out of bed and out of your bedroom. Good sleep depends on you associating bed with sleep and sex, nothing else - and particularly not with worrying. The main thing is to try not to worry about being awake.

● **If you can't sleep, don't watch TV or scroll through social media** (too stimulating). Listen to soothing music, a dull podcast or read a book you have read before. When you

start to feel sleepy, go back to bed.

MAKE TIME TO GET AMOROUS

SEX can improve your sleep. That is because regular sex boosts levels of the chemical oxytocin (also known as the 'love hormone' as it aids human bonding) while reducing levels of stress hormones such as cortisol. But sex seems to be a more effective sleep aid for men than for women.

STOP THE SLEEPWALKER

IF YOUR child or partner sleepwalks at around the same time every night, try gently waking them about half an hour before they would normally start sleepwalking. This should disrupt their sleep cycle, and in some cases that is enough to stop their parasomnia (the name for any sort of unusual physical effect that interrupts normal sleep)

You will need to do this every evening for at least a week to break the cycle.

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● *Adapted by Louise Atkinson from 4 Weeks To Better Sleep by Dr Michael Mosley, published by Octopus, priced £14.99. To order a copy for £13.49, visit mailshop.co.uk/books or call 020 3176 2937. Offer valid until June 30. UK p&p free on orders over £25.*

MISSED PART ONE IN YESTERDAY'S MAIL?
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IN TOMORROW'S Daily Mail
Balance test that's a lifesaver and what to feed your brain

Sing every day. Get off the bus a stop early. And stand on one leg while brushing your teeth. In the final part of our tribute series to columnist the world loved, here are...

Michael Mosley's

brilliantly SIMPLE DAILY TWEAKS to boost brain power and help you live longer

DR Michael Mosley's greatest skill – and his lasting legacy – was his ability to distil complex scientific concepts into simple, actionable advice that everyone can understand and try out for themselves. He made it his mission to unearth small changes which can have a big impact on our mental and physical health. Here, in the final part of our tribute series highlighting 160 of the life-changing tips he gave the nation, are the insightful tweaks and tricks he shared for boosting body strength and brainpower.

DANCE AWAY DEPRESSION AND DEMENTIA

DANCING has been shown to be more effective at improving your muscles, balance and brain health than traditional fitness exercises. It can alleviate depression, reduce the risk of heart disease and stroke, boost memory and protect against dementia. Brain-imaging studies reveal that it can boost the areas associated with memory and processing as you work out what to do with your arms and legs, and dancing with others can have powerful, stress-reducing effects.

FIRE UP YOUR BRAIN WITH SQUATS AND PRESS-UPS

PRESS-UPS and squats are some of the best exercises for your heart and brain. Squats – where you bend your knees as if you are about to sit on a chair – work the biggest muscles in your body (your thighs and buttocks) and are probably the best single exercise you can do. And press-ups are a fast and very effective way to increase upper-body strength. The amount you can pump out in one session also seems to be a good predictor of heart health. A healthy man in his 50s should be able to do 20, a woman at least ten.

Both exercises are good for the brain. Studies show they help to stimulate blood flow to the hippocampus, a part of the brain responsible for learning and memory.

Squats have also been shown to stimulate the release of a hormone called BDNF (brain-derived neurotrophic factor), which encourages the growth of new brain cells and connections. Think of it as fertiliser for your brain.

Interestingly, research shows squats have a more powerful brain-boosting effect than walking or jogging. Three to five minutes of squats three times a week is even more effective in terms of boosting brain health than a brisk 30-minute jog three times a week.

Press-ups have a similar effect. Experts believe it is the action of your head moving up and down, working against gravity, that benefits the brain.

The good news is you can still get the brain benefits even if you only try squats and press-ups for the first time later in life.

The key is to start gradually to avoid injury. If you have an existing back problem or high blood pressure or are frail, talk to your doctor before starting.

HOW TO DO A PRESS-UP: Lie face down with the palms of your hands under your shoulders and the balls of your feet touching the ground. Keep your body straight. With your elbows at right angles with the floor, push up. When you start, it might be easier to do this

with your knees on the ground.

HOW TO DO A SQUAT: Stand with your feet hip-width apart. Bend from the hips, keeping the weight in your heels. Keeping your back straight, bend until your thighs are parallel to the floor – imagine

you are preparing to sit in a chair. Clench your buttock muscles and push back up.

TEN TWEAKS TO GET MORE ACTIVE

TO improve your sleep and almost

every aspect of your health, it is important to find ways to incorporate activity into your day. Housework and gardening counts but try these other tips to increase your activity levels:

1. Buy a bike and cycle when you can.
2. If your destination is less than a mile away, why not walk? It will take you less time than waiting for a bus or finding somewhere to park.
3. Stand while talking on the phone. You'll burn calories and sound more assertive.
4. Use a basket at the shops rather than a shopping trolley. That way you do a bit of resistance training at the same time.
5. Drink lots of water. This not only keeps you hydrated but also increases the need for bathroom breaks, which means in turn more short, brisk walks.

FOUR WAYS TO BE MORE POSITIVE

AS Dr Mosley pointed out in one of his Saturday Daily Mail columns, studies show that a positive outlook is a predictor for living a longer life. If you're naturally a bit of a grump, try these tips to enhance positivity:

1. SET yourself small simple health goals and pat yourself on the back when you've achieved them.
2. KEEP your friends and family close and extend your social network. There's abundant

evidence that having close friends is one of the most important forms of protection against stress and premature aging.

3. STRIKE up conversations with strangers in the supermarket or coffee shop.

4. SMILE – even if you have to fake it. Studies show the effect of curling your mouth into a grin triggers chemical changes which reduces stress and boosts happiness.



READ POETRY OUT LOUD

READING poetry aloud is a great way to reduce stress. The rhythm automatically slows down our breathing which in turn activates the parasympathetic nervous system to slow down the heart, reduce stress and incite a feeling of calm.

important muscle mass which naturally declines with age. 5. If you really haven't got time to exercise, try 'exercise snacking' with each 'snack' (such as running up and down the stairs, taking a quick speed-walk around the block or jogging on the spot while you wait for the kettle to boil) lasting anything from 20 seconds to ten minutes. Studies show squeezing a few of these short periods of activity into your day can improve blood glucose and blood pressure more effectively than a 30-minute workout because when we stop exercising, our metabolism

keeps going a bit more quickly for a while as we recover. It doesn't matter what you do as long as you are elevating your heart rate and getting a bit warm.

TOP UP ON VITAMIN D

WHEN the sun comes out, roll up your trouser legs and sleeves and spend 10-15 minutes soaking up those rays. Recent research suggests a short blast of sunshine each day in spring and summer could help lift our mood, lower blood pressure and keep our immune system in good shape. Our skin is a Vitamin D factory which takes free sunlight and transforms it into this amazing nutrient. As well as being vital for strong bones, Vitamin D contributes to a well-functioning immune system. Studies have shown people with very low Vitamin D are at greater risk of heart disease, dementia, diabetes, multiple sclerosis and even some forms of cancer. Sunlight also triggers the release of serotonin, a natural mood-booster and it can help lower blood pressure.

STAND ON ONE LEG

BALANCE is something most of us take for granted, but it slowly slips out of our grasp as we get older putting us at risk of falls.

But you can very swiftly improve your balance. By integrating balance exercises into your day, you can boost your core strength, posture and coordination and stand up straighter (which reinforces messages from sensors in your inner ear, muscles, joints and eyes that tell your brain where your body is in space and keep you from falling over).

The easiest way to keep your balancing skills active is to stand on one leg for a few minutes every day. Just shift your weight on to one leg while brushing your teeth or waiting for the kettle to boil. You might want to start by resting a hand on the sink, or the back of a chair.

When you can happily balance for 30 seconds on each leg, try doing it with your eyes closed for a more intensive challenge.

time walking group. You might be surrounded by people who are just dying to lace up their trainers. Enjoy the camaraderie and offer encouragement to one another when you feel like giving up.

FIVE EASY AND EFFECTIVE WAYS TO GET FIT

1. Begin the day with a brisk walk. Getting out within an hour or two of getting up gives you the benefits of exercise PLUS exposure to natural light, and this combination can improve your sleep (by helping to reset your body clock), boost your mood, increase your fitness and cut your risk of heart disease and diabetes. Any walk –

short, long, fast or slow – will strengthen muscles and bones, reduce joint and muscular pain, burn a few calories and increase energy levels.

2. Download a seven-minute workout app (they're free) – it will get you doing a quick but effective series of cardio and strength exercises each day. No matter how busy you are, you've got seven minutes to spare.

3. Embrace the speedy effectiveness of High-intensity Interval Training (HIIT) which condenses the benefits of a much longer workout into just a few minutes. You have to give maximum effort in three or four 20-second bursts (with a short rest in between), whether you're on an exercise bike, doing sprints, jumping jacks or even running up the stairs.

4. Make a regular weekly (or bi-weekly) commitment to strength or resistance training using weights, bands or bodyweight. This helps maintain and build

compounds which travel to the heart and brain and boost cerebral blood flow which aids learning and memory.

Jump on to the children's video games – research shows that action-packed gaming (particularly those which involve quick thinking, navigating around environments, and finding visual targets) can be good for your brain and even for your eyesight. They have been shown to boost working memory (your ability to remember more than one thing at a time), your focus and your ability to multi-task.

Commit to learning new skills – the process of learning, no matter what your age, forces your brain to generate new brain cells, forge new pathways and grow new connections, thereby boosting your brain power. One of the best skills you can acquire is learning a new language, because juggling between sounds, words, concepts and grammatical and social rules enhances blood flow and connections across the entire brain. It can even improve intelligence. But for maximum benefit, you have to practise for five hours a week.

Read books – particularly fiction. Reading is not only good for empathy and social skills, it can improve memory and protect against depression. Fiction acts as a 'whole brain' workout as your brain works to imagine the settings, sounds, smells and tastes described, and this activates the many different areas of the brain that process these experiences in real life. Research from Yale found those who read for 30 minutes a day lived, on average, 23 months longer than those who didn't.

Count your blessings: There is solid science that getting into the habit of being regularly grateful can make you feel happier, lower your blood pressure, improve sleep, ease pain and even rewire your brain.

Glug a glass of water. Studies show being hydrated can improve attention and help with problem-solving. It also enhances physical performance; helps you keep calm and can boost your mood. Water makes up 60 per cent of our bodies and 90 per cent of our brains and even losing 1 to 2 per cent of it is enough to impair our cognitive function. That's why drinking more water leads to improvements in both working and short-term memory.

TWO UNEXPECTED WAYS TO BOLSTER IMMUNITY

1. Take a cold shower – the blast of cold helps to fire up your body's defence mechanisms which helps you handle stress and infection. Cold-water immersion has an anti-inflammatory effect, which is important given that so many conditions – Alzheimer's, type 2 diabetes, heart disease, depression – have their root in chronic inflammation.

2. Get outside into parkland, meadows or forest. Studies show being in green spaces helps reduce stress and anxiety and can boost your immune system. By taking deep breaths you will be inhaling phytoncides – the essential oils given off by trees which protect the trees from microbes and insects, but which have been shown to strengthen the immune system.

Adapted by LOUISE ATKINSON from *Just One Thing by Dr Michael Mosley (Octopus, £9.99)*. © Michael Mosley 2023. To order a copy for £8.99 (offer valid to 30/06/24. UK P&P free on orders over £25) go to www.mailshop.co.uk/books or call 020 3176 2937.