

Surgery patients sent home at risk of opioid addiction

THOUSANDS of NHS patients are being prescribed potentially addictive opioid drugs without safeguards to prevent them from becoming hooked, new research published in the journal *Anaesthesia* shows.

Opioid medication, such as codeine, tramadol and oxycodone, can be highly addictive and is at the centre of the so-called opioid epidemic.

The new study, the first to look at opioid prescribing following surgery in the UK, revealed that despite more than a fifth of patients being discharged from hospital with an opioid prescription, hospitals are failing to carry out basic steps to reduce the chance of patients becoming dependent on these drugs.

Researchers from Nottingham University found that a third of patients are not given a time limit for taking opioids and two thirds do not receive any written advice about how to wean themselves off the medication, which can become addictive within a matter of weeks.

This goes against national advice from the Medicines and Healthcare products Regulatory Agency (MHRA), issued to minimise the risk of addiction.

Furthermore, none of the doctors who oversee post-op care at the 14 hospitals included in the study had received training in prescribing opioids following surgery, despite this being in the MHRA guidelines, researchers found. Only one of the hospitals advised GPs to avoid repeat opioid prescriptions.

Dileep Lobo, a professor of gastro-intestinal surgery, who led the study, said the findings were 'concerning'.

'Having surgery is a major risk factor for opioid addiction, because these drugs are widely used for pain relief following operations,' he told *Good Health*. 'We know patients can become dependent on opioids in just two weeks, but are more likely to do so if they take them for 90 days after surgery.'

Previous research has shown that up to a quarter of patients prescribed opioids following surgery will be taking them for more than three months (if pain continues for more than 90 days, it is considered chronic pain and should be treated with non-opioid medications and strategies such as exercise and talking therapy, unless it is cancer pain).

Professor Lobo adds: 'The poor and haphazard prescribing habits identified in this study are known to contribute to opioid misuse and are concerning.'

'Without safeguards, patients are more likely to become addicted. This can have devastating consequences both to their health and their lives.'

Opioids can have a range of side-effects, including sleepiness, nausea, anxiety and irritability, which can affect people's ability to work, carry out daily tasks and sustain relationships.

Taken at higher doses they can slow breathing and heart rate,



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By **RACHEL
ELLIS**

which can be fatal.

They are especially dangerous for older patients who are more likely to have underlying health problems.

Opioid prescriptions increased by 34 per cent in England between 1998 and 2016, according to a 2019 study in the journal *Lancet Psychiatry*, with the size of the doses of the drugs on the rise, too.

The number of people prescribed opioids grew by another two million between 2006 and 2017, according to research by the University of Manchester, with prescriptions of codeine increasing five-fold over this period; and the strong opioid oxycodone 30-fold.

Professor Lobo says this increase was probably due to poor management of patients' expectations of pain, so they 'want to be pain free rather than have manageable pain'.

The new study looked at the records of 499 adults who'd undergone routine surgery, including hernia repair and gall bladder removal, in 14 NHS hospitals in England in March 2019.

It found that 21 per cent were discharged with an opioid prescription — a quarter were told when they should stop taking the drugs, and more than 70 per cent received no written advice on weaning themselves off the drugs, defying official guidance.

The study also found that there was no guidance or training on opioid prescribing in any of the hospitals included.

'This study identified a pattern of poor opioid prescribing practices, and a lack of guidance and formal training,' says Professor Lobo. 'Patients prescribed opioids following sur-

gery should be told the dose and duration of treatment so they know when they should stop taking it and how they should do that.

'This would help to prevent doctors providing repeat prescriptions without assessing whether the patient still needs the drug, which we know has been happening more during the pandemic and is more likely to lead to addiction.'

Particularly worrying is the prescribing of long-acting opioids such as oxycodone for severe pain because it is much more difficult to reduce the dose of these drugs due to their long-lasting effects, making dependence more likely, says Professor Lobo.

The MHRA issued guidance in 2020 on the prescribing of opioids. However, these are 'rudimentary' and 'do not give advice on how to manage post-operative pain and how to wean patients off opioids,' says Professor Lobo.

To address this issue, he and a team of other specialists have put together a ten-point plan to improve opioid prescribing following surgery.

Published in the journal *Anaesthesia* last year, the plan includes avoiding long-acting opioid drugs, such as oxycodone, because of the greater difficulty reducing the dose; limiting the number of drugs prescribed at discharge from hospital to a week's worth and avoiding automatic repeat prescriptions (for instance, a GP should check there are no complications causing the pain and prescribe non-opioid painkillers if possible).

Professor Lobo is now planning to repeat the study to see if opioid prescribing habits have improved over the last three years, and another to look at the extent of repeat opioid prescriptions after surgery.

'Opioids are good analgesics and are needed in the short term for many patients,' says Professor Lobo.

'However, the duration of prescribing and dosage following surgery should be limited and long-acting preparations should be avoided as they are more likely to result in long-term use.'

'Despite MHRA and other guidance, prescribing of opioids is still suboptimal,' he says.

FOR many years doctors have used body weight as a key indicator of overall health, but it's now clear that some people can be slim yet unhealthy, or even overweight but apparently in rude health (although this still divides expert opinion).

Now research by the Mayo Clinic in the U.S. suggests health can be more accurately defined — and longevity predicted — by four other health parameters: aerobic fitness, muscular strength and endurance, flexibility and body composition. Experts believe these are more useful than any measurement of your weight.

These are all things you can check yourself at home — and importantly, by working to improve your scores, you can boost your health and resistance to illness and disease as you get older.

We asked leading experts for the best DIY at-home tests to check on these four health parameters — with tips for how best to work to improve them.

By **LOUISE
ATKINSON**

AEROBIC FITNESS

AEROBIC fitness measures your body's ability to take in and use oxygen, and is closely linked to overall health.

'The process of taking oxygen and using it to produce energy for your muscle cells integrates many of the body's most important systems including muscles, heart, lungs and blood vessels, and as such it is a good indicator of a broad range of your bodily functions,' explains Dr Stuart Gray, a senior lecturer in exercise and metabolic health at Glasgow University.

Scientists measure aerobic fitness using a 'Vo2 max' score, the maximum amount of oxygen your body can utilise during exercise. This score can be improved through challenging your lungs and heart with regular exercise.

The higher your score, the better because it suggests your body is more efficient at taking oxygen from the air and delivering it to your muscles. The more oxygen they get, the more nutrients you can transform into the fuel your muscles use to contract and perform.

Do one of the following three tests to measure your current level of aerobic fitness and then repeat the tests monthly to monitor your progress.

TEST #1: Check your resting heart

THE number of times your heart beats per minute when you're at rest provides a snapshot of how well the heart muscle is functioning, with a slower beat (usually) a sign of stronger heart health and an efficient cardio-vascular system.

Many studies have linked a high resting heart rate with a shortened life expectancy — a faster heartbeat indicates that your heart is having to work harder, suggesting your cardiovascular system isn't working at its best.

Age, chronic sleep deprivation, excess weight, smoking and prolonged stress can all cause your resting heart rate to speed up — regular exercise tends to slow it because it builds strength in the heart muscle, meaning it can pump a greater amount of blood with each heartbeat.

The best way to test your resting heart rate is lying in bed, having just woken up. Clear away all distractions and don't speak during the measurement. Now simply place your index and middle fingers on either the side of your neck or the inside of your wrist. Set a timer for 15 seconds and count the beats, then multiply the number of beats by four.

Take your measurement more than once on consecutive mornings to get a baseline figure, then repeat the exercise each month.

Scores to aim for:

NOTE: Women's (smaller) hearts naturally beat slightly faster than men's:

40s: 57-66 beats per minute for men; 60-69, women

50s: 58-67, men; 61-69, women

60s: 57-67, men; 60-68, women

70s: 56-65, men; 60-68, women

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exertion — not speeding up too much and returning to normal swiftly afterwards.

Set a timer to three minutes: step up and down off the bottom step of your stairs (follow a pattern of 'up, up' then 'down, down' so both feet are on the step before you step down) at a rate of 24 steps per minute for three minutes (to help you set the right pace, set the interval timer on your phone to beep 24 times per minute or say 'one elephant' for up and 'two elephants' for down to approximate the correct speed). After three consecutive minutes, rest in a chair for one minute and then immediately take your pulse.

Scores to aim for:

40s: 90-106 beats per minute for men; 96-119, women

50s: 93-112, men; 101-124, women

60s: 96-115, men; 103-126, women

70s: 102-118, men; 105-130, women

TEST #3: The walking test

USE a car to measure exactly one mile (1,609m) of unobstructed path on flat, even ground, or go to a running track (one mile is four laps around the innermost lane). After briefly warming up (march on the spot for a few minutes) start a stopwatch and set off to walk that mile as fast as you can. At the end of the mile record how long it has taken you.

This test was devised in 1986 by physiologists and cardiologists at the University of Massachusetts to measure VO2 max without the need for laboratory equipment, as it evaluates the capacity of your lungs in relation to the volume of exercise you can tolerate.

'By exercising regularly, and by repeating this test every two months you should see your times improve — or at the very least plateau rather than decline naturally with age,' says Dr Gray.

Scores to aim for:

40s: 13 minutes, men; 14 mins, women

50s: 13.24 mins, men; 14.42, women

60s: 14 mins, men; 15, women

70s: 15 mins, men; 18, women

YOU can also use the time it took you to walk that mile to work out your VO2 max by also measuring your heart rate immediately after you finish the walk: put both figures into an online calculator (such as this one br-anmac.co.uk/rockport.htm).

VO2max scores to aim for:

40s: 39+ for men; 34+, women

50s: 36+, men; 31+, women

60s: 32+, men; 28+, women

70s: 29+, men; 25+, women

WHAT TO DO: The 'best way' to improve aerobic health is to find something you enjoy 'which you can build into your daily life, long term,' says Dr Gray. He recommends regular cycling, swimming, running or walking — but he says it can take three to six months before you notice improvements in aerobic health and adds that because aerobic health naturally declines with age, plateauing on your scores over time can actually be a mark of success.

MUSCULAR STRENGTH AND ENDURANCE

Muscle strength and endurance is key to preventing falls and as Naveed Sattar, a professor of metabolic medicine at Glasgow University, explains, it is also important for general good health: 'with increased activity, blood vessels

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in strength very rapidly, 'the immediate feedback is hugely rewarding'.

FLEXIBILITY

WE become less flexible with age but the degree to which we lose flexibility can be an indicator of failing joint, muscle and tissue health. Professor Skelton explains that a large part of flexibility is genetic: 'Some people can still touch their toes in their 80s,' says Professor Skelton.

'But generally with age, muscles become shorter, connective tissue becomes more fibrous, and we gradually lose the range of movement in our joints.'

'It really is a case of use it or lose it,' she says. 'Flexibility is something we should all be working on daily. Regularity is key.'

A good range of movement ensures blood supply to the joints,

gers. A minus (-) score means you could not touch the fingers of both hands, a plus (+) score means you overlapped your hands.

Scores to aim for: (from Professor Skelton's 'Later Life Training' clinic)

50s: -10cms to 1cm, men; -5 to 7cms, women

60s: -17cms to -2cms, men; -10cms to 5cms, women

70s: -20cms to -5cms, men; -12cms to 2cms, women

80s: -25cms to -7cms, men; -17cms to -2cms, women

TEST #2: Chair sit and stretch test

THIS is designed to measure lower body flexibility in older adults. Sit on the edge of a straight-backed chair about 17in (44cm) high. Keep one foot flat on the floor, then extend the other forward with your knee straight, heel on the floor, toes pulled towards you (ankle at 90 degrees).

Place one hand on top of the other, with the tips of the middle fingers even. Sit up tall, inhale, then as you exhale, bend at the hip and reach forward towards your toes. Keep your back straight and your head up (don't curve forward). Hold the stretch for two seconds.

Ask someone to measure the distance between the tip of your fingers and your toes.

'With regular stretching exercises, your flexibility should improve,' says Professor Skelton, 'so use this test to measure your improvements and to check you are not becoming increasingly inflexible with age.'

Scores to aim for:

50s: 5-10cm past your toes, men; 10-15cm, women

60s: touching toes, men; 5cms past toes, women

70s: 5-10 cms short of your toes, men; 5cms short of your toes, women

80s: 10cm short, men; 5cms short, women

WHAT TO DO: The key is practice and Professor Skelton also recommends warming up before stretching to ensure a good supply of blood into the joints and muscles. 'The best time to stretch is at the end of an exercise session,' she says. 'Yoga and Pilates are fabulous, and I recommend swimming — as long as you do front crawl or back stroke which require you to use your shoulders and twist your torso. It doesn't matter how good or bad you are — the key is to aim to improve on your range of movement.'

which keeps them healthy, and it stops inactive muscles shortening, or lengthening which can pull the spine and joints out of place. Check your upper and lower body flexibility with both of these tests.

TEST #1: The 'back scratch'

SHOULDER flexibility is important for everyday tasks such as brushing our hair. Professor Skelton adds: 'We also all need good shoulder function to lift ourselves out of the bath, or to push ourselves up off a bed in later life, and if you trip, you need to be able to reach out and grab something — shoulder flexibility is often the key difference between a trip becoming a fall.'

As a measurable test, place one hand behind your head and back over the shoulder and reach as far as possible down the middle of your back, your palm touching your body and the fingers directed downwards. Place the other arm behind your back, palm facing outwards and fingers upward, and reach up as far as possible, attempting to touch or overlap the middle fingers of both hands.

Ask someone to guide your hands so they're aligned, one above the other, and to measure the distance between the tips of the middle fin-

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become more pliable and so blood pressure can often lower and the heart then finds it easier to pump blood around the body, improving ability to supply oxygen to tissues,' he says.

Measure your strength using both of the following tests.

TEST #1: The 30-second sit to stand test

THIS measures the number of times you can rise from and sit back on to a chair in 30 seconds, and is a standard way of measuring leg strength and endurance.

'It's a great indicator of muscular strength and endurance because it integrates co-ordination, power and balance,' says Dr Gray.

Sit comfortably on a dining room chair, your feet firmly on the ground, your arms folded. Set a stopwatch, then stand (without using your hands or arms for support) and immediately sit again gently as many times as you can in 30 seconds.

'When you find this easy, you can increase the challenge by progressing to a softer, lower easy chair which demands greater strength and balance to get up from and down without support,' says Dr Gray.

Dawn Skelton, a professor of ageing and health at Glasgow Caledonian University says her team regularly uses tests like these to assess fitness levels in older populations. 'This test is a great measure of lower limb strength which is needed to climb stairs, walk distances, get out of a chair, bath or car and rise from the floor,' she says.

Her team has devised scores to aim for:

50s: 15-21, men; 12-20, women

60s: 12-18, men; 10-16, women

70s: 10-17, men; 10-15, women

80s: 8-13, men; 9-13, women

TEST #2: Push up

THE push up is a good way to build and measure upper body muscular endurance, and it has become a basic fitness test to assess upper body fitness.

To perform a proper push up, place your hands flat on the ground, underneath but slightly wider than your shoulders. Lift to a high plank position with your body in line from head to hip to heels. Bend your elbows and lower your body in a straight line until your elbows are bent at a 90-degree angle and your chin touches the floor. Then push back up.

For the test, set a timer, and see how many good press-ups you can perform in one minute (as you get