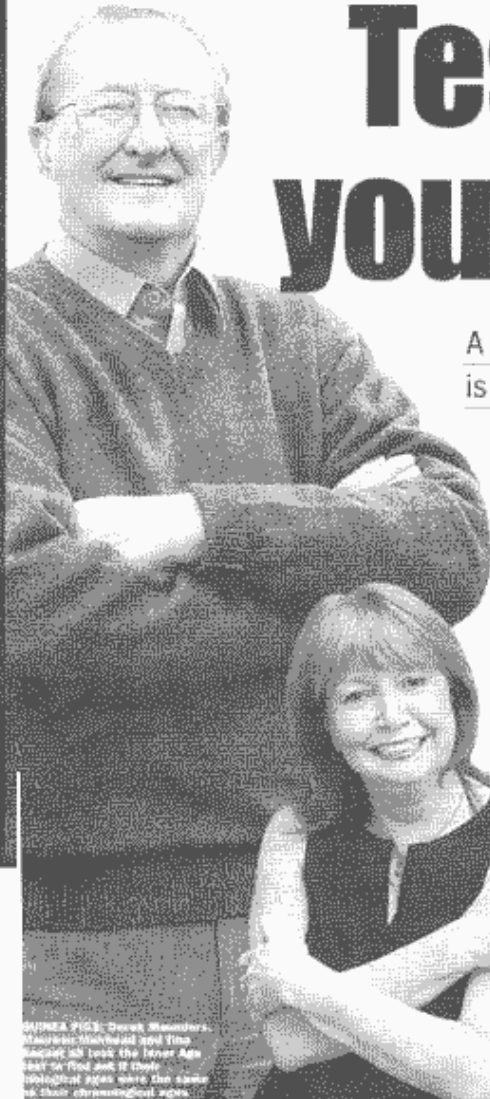


Test how old you really are

A new system can measure how fast your body is ageing. **Tessa Thomas** finds three volunteers



ONCE UPON a time, age was all in the mind: you were as young as you felt. Then, we were told 40 was the new 30 and, before you could count your grey hairs, 50 was the new 40. Clichés about age abound because it matters so much to us how old we are or look. But how old most people feel changes with their mood, the time of day and shifting expectations. How accurate are our feelings?

Recently, scientists have begun to explore a new concept that measures age according to your current biological condition, rather than your birth date.

"Biological age looks at how your body is *really* ageing by measuring what we call bio-markers," says Professor Robert Weale of the Institute of Gerontology at King's College, London. "While the ageing process is inevitable for everyone, individuals age in different ways and at different rates. Bio-markers are indicators of how fast one's different organs and biological systems are actually ageing."

The speed at which they age is measured in an individual and compared against the national average, giving a biological age that could be higher or lower than a person's chronological age. At the HB Clinic in London, you can now walk in and have your biological age tested. It is the first clinic in the UK to use this Inner Age system, which feeds your biological vital statistics – such as blood pressure, metabolic rate and lung capacity – into a computer. The program analyses each of the 45 bio-markers, then figures out your body's age.

The positive part about this "age" is that there is something you can do about it. As well as a detailed report on each bio-marker, the Inner Age system also produces a colour-coded body map that highlights areas of the body according to their age: from dark red (older than you should be and requiring immediate attention), through mid red (still of concern), to yellow and oranges (normal), and green (biological age under actual age) to dark green (youthful for one's years).

The most common "old" markers are lung power, hand grip and balance. Different parts do not age evenly but all can be readily improved through lifestyle changes, says Phil Means of the Inner Age Systems Group. "This is probably the great advantage of this kind of system. Patients can literally see what's wrong and they can take practical steps to rectify the problem areas."

There is an ongoing debate about the extent to which genes or behaviour influence the ageing process most but,

GINNEA PILL: Derek Mansfield, Tessa Thomas, Phil Means and Tim Mansfield sit with the Inner Age system. The system tests 45 biological markers to give the same as their chronological ages.

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like Professor Weale, Micans favours behaviour. He said: “Genetics is obviously a major factor but there is no doubt you can slow down ageing a lot by lifestyle changes.”

The advice on clean living is now well-worn: don't smoke or drink, sleep well and exercise and gorge on fruit and veg. For most people it's an effort to put into practice. They don't really know which part of them is ageing or causing problems, they don't know if their clean living is making any difference and they often give it up as a result. The new system increases motivation by supplying fine detail and visible proof.

SOME months after their first reading, patients can return for a second visit to see if their colour codes have improved. They always register an improvement, says the clinic's Dr Lynette Yong, adding: “If they can see the problem and don't feel they're trying to fix everything at once, they get on with it.”

Most of the solutions are practical and predictable: exercise to improve lung and heart function; lowered sugar intake to balance insulin production;

insurance industry is looking into using biological age readings.

As Micans explains: “It's no gimmick. The readings can be a warning sign of developing degenerative diseases.”

It's not always so straightforward. An obese patient with poor cardiovascular condition scored a biological age lower than his chronological age.

Ellis says: “He was a strong character with a positive outlook on life and that could have affected his metabolism and immune system, which were very good.”

Like strength of character or attitude, brain age cannot be measured in the way that, say, heart condition can.

Professor Ian McKeith, of the Institute for Ageing and Health at Newcastle University, says: “Our brains age at very different rates but the decline is difficult to quantify. A brain that, on a scan, appears shrunken can, in fact, have good function.”

While the brain's ageing process remains something of a mystery, McKeith says that it is proven to benefit from mental exercise, adding: “Cognitive exercise – learning new things, exposing oneself to new situations – all help to slow down the ageing of the brain.”

If there is one single measure that holds back the years, the anti-ageing

lung and heart function; lowered sugar intake to balance insulin production; lower salt and relaxation exercises to reduce adrenal stress.

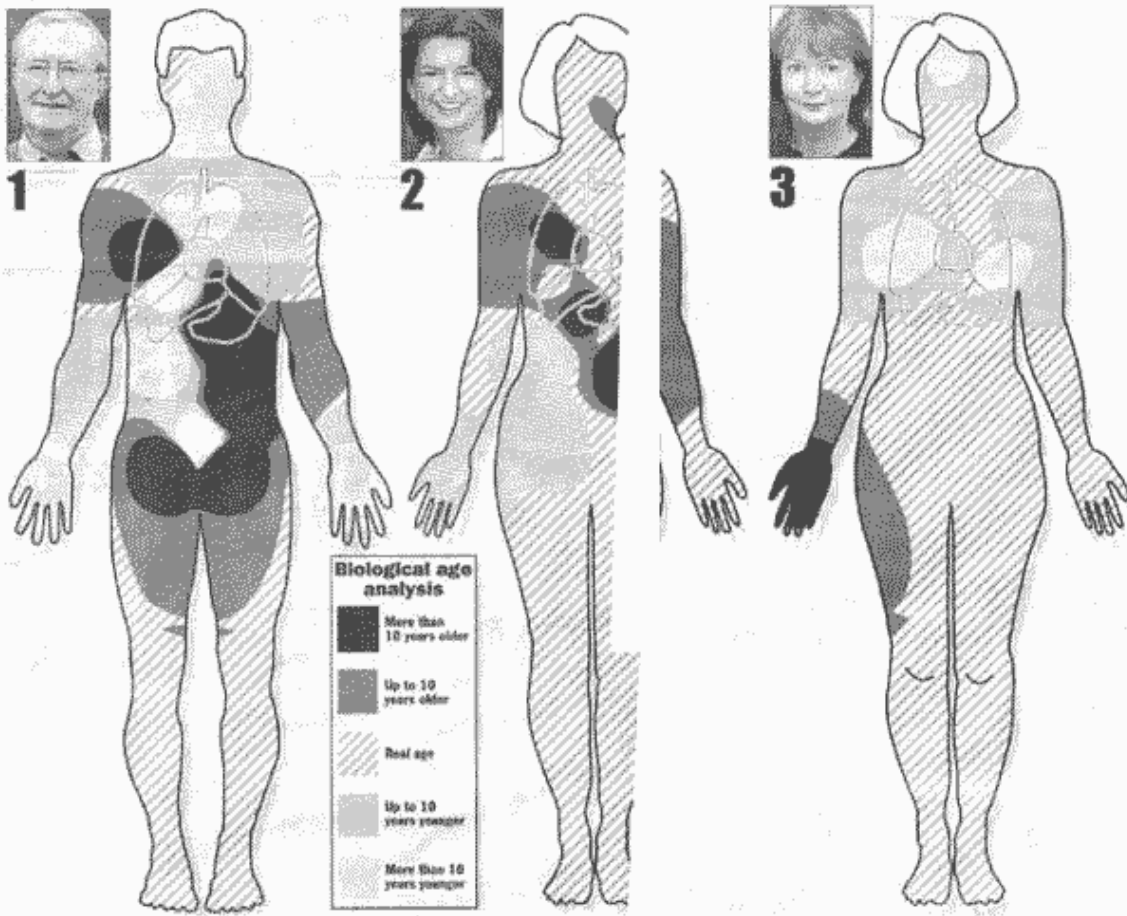
Nutritionist Anita Ellis, who takes the readings, says: "A lot of people have an intuition about what state they're in and what they need to do."

There are surprises, however, such as Tina, who, despite an apparently healthy diet and active lifestyle, had a heart considerably older than her 29 years. Such anomalies explain why the

if there is one single measure that holds back the years, the anti-ageing experts agree it is exercise.

As the science evolves, more of us should get to see how well we're ageing on the inside, too, and, if enough people take steps to remedy the problem areas, 40 really will become the new 30.

● For more information, log on to www.hbhealthonline.com; email clinic@hbeauchamp.com; or tel: 020 7838 0765.



So what is their inner age?

1 DEREK MAUNDERS, retired
Chronological age: 65
Biological age: 50

"I feel as fit as a butcher's dog, so I wasn't that surprised at the result. But the biological age is only a number. You have to take a second look at the detail, and I found I had a bad PSA [Prostate Specific Antigen] reading. So I went to the GP and, though I had no symptoms, a biopsy showed I had a malignant growth. I had my prostate removed and I'm now back playing badminton and squash.

"I was thinking of going to a Well Man Clinic before I had the Inner Age test but I'm glad I had this instead. We all wear out in different ways as we get older and knowing exactly where your weak spots are can be a life-saver."

2 TINA BAQUET, psychologist
Chronological age: 29
Biological age: 31

"I was a bit worried about what age I'd be because I'm turning 30 this year and I haven't been doing sport like I used to. I found I hadn't lost much fitness, in fact, which was just as well. It rescued me from being really old, because my fibrinogen level was that of a 55-year-old. My uric acids were high too.

"I've been drinking much more water, just like my mother always told me to, which has brought both down. I feel less tired too, and the beautician who does my facials said I look much better. I'll check how things are underneath with another test in time. I want to be healthy rather than young but, in a way, it's the same thing."

3 MAUREEN MUIRHEAD, company director
Chronological age: 44
Biological age: 38

"People have tended to think I'm younger than I am, but I was still pleasantly surprised at the result. Although I jog around Hyde Park three times a week and have a healthy diet and drink loads of water, I was intrigued to know how things were on the inside.

"I didn't do brilliantly on the balance, so might take up yoga again. But I found the whole thing quite therapeutic and reassuring. Before I had the test, I had been thinking that I feel better now than I did in my 20s.

"I didn't do badly but it shows the disparity between how you feel and what you are!"

Now test your biological age

These tests can be done at home without special equipment and are a guide only. If you have reason to be worried about premature ageing, you should ask your GP for tests, such as blood pressure and cholesterol, and further advice.

1. STATIC BALANCE:

Stand unsupported on your left leg, with your right leg bent at 45 degrees and hands on hips. Close both eyes and keep them shut. Time in seconds how long it is before you lose your balance and have to bring the other leg down. Repeat the test three times, allowing five minutes between each test. Take the best score.

70-plus seconds:

biological age in the 20s

60-69 seconds:

biological age in the 30s

50-59 seconds:

biological age in the 40s

40-49 seconds:

biological age in the 50s

30-39 seconds:

biological age in the 60s

20-29 seconds:

biological age in the 70s

Less than 19 seconds:

biological age in the 80s

Balance gets worse with age as it relies upon ear function, and the ability to hear high frequencies declines with age.

2. NEAR VISION:

Take a long ruler (ideally a yard stick). Position it on the cheekbone directly below the eye to be tested (glasses or contact lenses for nearsightedness can be worn, but reading glasses should not). Hold a business card, which usually has about the right size writing on it, upright and facing you, as far out along the ruler as possible. Slowly move the card toward the eye, until it begins to blur (ie, the point at which it becomes difficult to read without strain). Measure the distance at which the card can be easily read at its nearest point.

9cm or less:

biological age in the 20s

10-15cm:

biological age in the 30s

16-30cm:

biological age in the 40s

31-60cm:

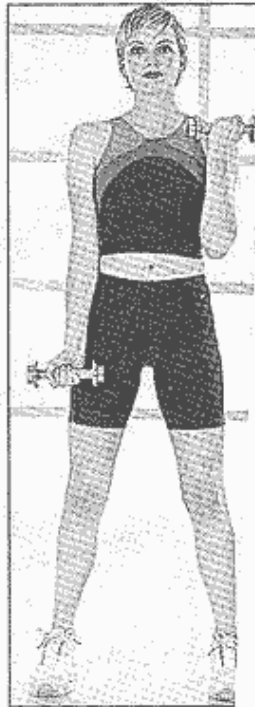
biological age in the 50s

61-90cm:

biological age in the 60s

Over 90cm:

biological age in the 70s



FIT FOR LIFE: Experts agree that physic exercise slows age

With age, the lens of the eye becomes progressively less elastic, resulting in presbyopia or loss of near vision.

3. SKIN FOLD THICKNESS

Pinch the skin on the back of the hand, trying to take as much skin as possible. Hold for one minute, then release and time how long it takes for the skin to flatten back into the surrounding surface.

Less than one second:

biological age in the 20s

1-2 seconds:

biological age in the 30s

3-4 seconds:

biological age in the 40s

5-10 seconds:

biological age in the 50s

11-30 seconds:

biological age in the 60s

33-45 seconds:

biological age in the 70s

Over 45 seconds:

biological age in the 80s

Skin loses its collagen and elastin with age, so it takes longer to contract back to shape the older it is.

4. ARCUS SENILIS

Look in the mirror and study your eyeball. Is there a white arc around the edge of

your cornea, the transparent outer shell of the eye? This is caused by fatty deposits, mainly cholesterol, in the peripheral cornea.

The longer the line (it can form a complete ring), the higher your cholesterol is likely to be.

As a sign of ageing, an unbroken line is normal in someone of 80, but a cause of concern in middle age. The more complete the line, if it is visible, the older your biological age.

5. BRAIN FUNCTION

Count back in sevens from 100. If you are under 40, it should take no longer than 20 seconds; at 40 to 60 years less than 25 seconds. Much longer and you may need to do cognitive exercises to stop your brain ageing. Think of as many fruit and veg as you can in one minute. If under 60, you should get at least 15. For over-60s, draw a clock at a given time, say 3.50. You should be able to do this in less than a minute. Difficulty doing say may indicate early signs of brain degeneration.

6. OTHER NOTICEABLE SIGNS OF AGEING INCLUDE:

Tooth decay (which can affect the heart); declining grip strength; decreasing senses of smell and taste, and shortness of breath after climbing a flight of stairs.