

Men's Health

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SMALL STEPS, BIG RESULTS



**TRAIN LIKE AN OLYMPIAN!
EARN LIKE A BILLIONAIRE!
BE THE KING OF THE BEACH!**

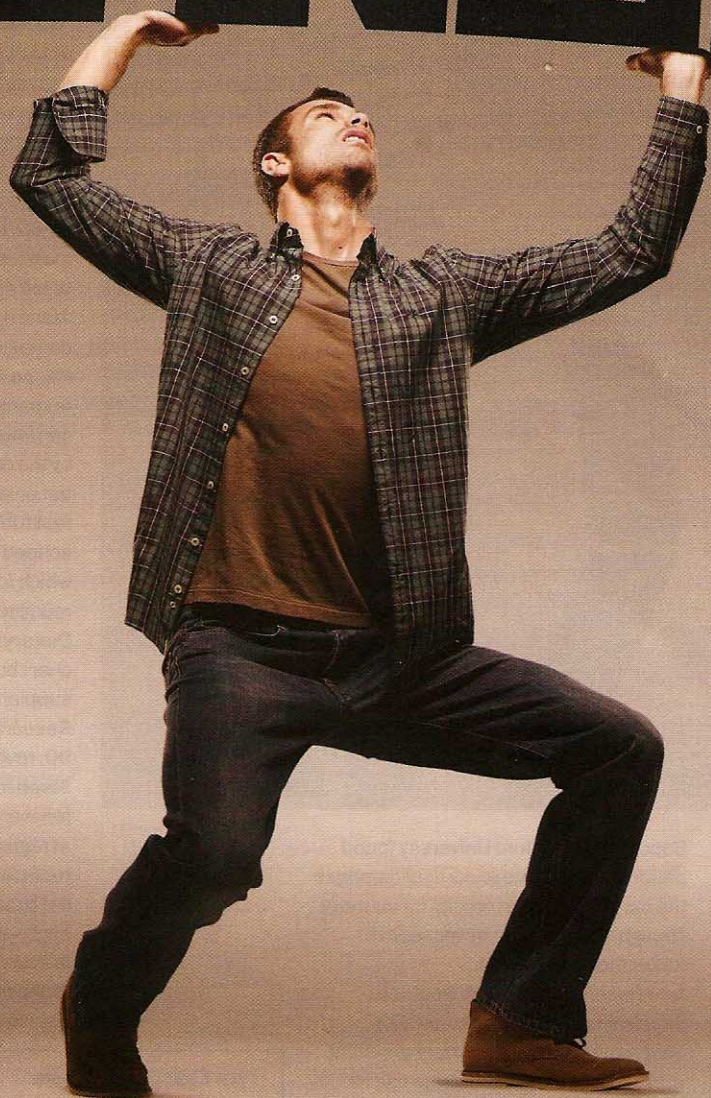


Is

STRESS

crushing
you?

Life's pressures can ruin your muscles and even your mind. Here's how to beat it



Is stress getting on top of you? We'll show you how to beat it

Boss on your back, bills in your briefcase, bumper to bumper commute – you're in the stress zone. Your body's alarm system triggers your adrenal glands to pump out the fast-acting hormones adrenaline and cortisol. Your pupils dilate, you're less sensitive to pain, and sugar from your liver energises your muscles. But if it's a broken coffee machine rather than an angry mammoth that's causing distress then these hormones spell disaster. Studies show stress and its hormonal offspring cortisol lower immunity, trigger disease and generally give you a good kicking.

Here's the lowdown on the chemical assault and how to defend your body:

Seeing the shrink You hit the bar-bells to workout your work issues, but if you're stressed cortisol stimulates the release of somatostatin, which blocks your growth hormone (GH). **Studies in Endocrine Reviews confirm low GH levels lower your energy and strength.** And a study in *The American Journal of Human Biology* found cortisol also triggers your body to turn muscle protein into glucose for energy. That means less strength and less muscle.

Sex drive nose-dive The boardroom can take its toll in the bedroom. **Stress hormones have the same building blocks as sex hormones, "so if your body is churning out the stress variety, your sex hormones suffer, meaning lack of libido and a potential bedroom flop,"** says stress counselling specialist Dr Pauline Harding from the University of Illinois. **Not sleeping on it** If your mattress is like quicksand in the mornings but you lie there wired at night, your circadian rhythm – a 24-hour cycle controlling cortisol release – could be out of whack. Pennsylvania State University's Sleep ►

MURKAGE
RELATIONSHIPS

Feel like the walls are closing in? Fight back with *MH* know-how

CAREER MONEY
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◀ Research Centre found a clear link between insomnia and cortisol. And even if you do drop off (try Graham Poll's autobiography...) University of Chicago studies found high cortisol levels disrupt your regenerative REM sleep. This saps alertness and leads to depression and increased risk of heart disease.

Engine failure It doesn't make the headlines, but the thyroid does a crucial job driving your metabolism. And cortisol can wreak havoc in the metabolic engine room. "Cortisol limits the release of the hormone that tells the thyroid to work," says Dr Barry Durrant-Peatfield. That can have a knock-on effect, causing loss of sex drive, depression and weight gain.

Gutted Besides upping your intake of gut-expanding "relaxation juice", stress can advance directly to your gut. Studies in *Obesity Review* showed cortisol causes a redistribution of fat from extremities to trunk and face. Like beer, but less fun.

Memory blanks Forget the dry cleaning? Again? Research by Professor Robert

Sapolsky at Stanford University found prolonged exposure to cortisol damages the part of your brain crucial for memory.

Though strangely you never seem to forget those deadlines...

999 Recent University of Southern California research nailed just how hard stress hits your heart. "Persistent work stress brought the same risk for fatal heart attacks as smoking and not exercising," the study said. Is the company car really worth it?

How to stress-proof your body

If you can't eliminate the source of your stress with a helicopter for the commute and a hitman for the boss, these steps will harden you against it:

Eat up Greed is good. Studies in *Nutrition Research* found restricting your calories causes a significant jump in cortisol. So don't stress about that extra helping.

C it through Stress triggers you to lose more vitamin C down the u-bend and research in the *Journal of Strength and*

Conditioning showed taking a gram a day lowered cortisol levels in weightlifters. Their testosterone to cortisol ratio also improved by over 20%, aiding muscle building and recovery from training. Boost your dietary vitamin C with kiwis, guava, pomegranate, broccoli, strawberries and mango.

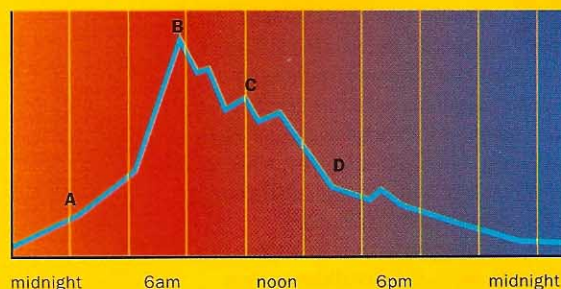
B calm Research in *Alternative Medicine Review* concluded that vitamin B5 reduced production of cortisol in high-stress conditions. Boost your B levels with wholegrains, cauliflower, broccoli, salmon, liver, sweet potatoes and tomatoes. Or pop a daily 500mg supplement. Biocare B-Complex (£5.85 for 30, biocare.co.uk) also contains magnesium, and research in *The Journal of the American College of Nutrition* found a lack of this mineral amplified the damage stress does to your heart.

PS, no stress University of Naples research discovered a chemical which can lower cortisol levels by 30%. It goes by the catchy title of phosphatidylserine, but unless you spend your days with test tubes, call it PS. The findings were echoed by California State University, which found taking PS supplements also reduced post-training muscle soreness. Dietary sources are sparse; eggs top the chart but only supply trace quantities so supplement with 500mg per day (Allergy Research PhosSerine capsules, £51 for 90, revival.co.uk).

Sleep it off Regular sleep is key to stress recovery so lights off and alarm clock on at regular times, sleep in a blacked-out room and exercise in the mornings. Also, eat trout, yoghurt, salmon, chicken and eggs – all rich in vitamin B12. Research in *Psychiatry and Clinical Neurosciences* found that B12 helped reset the sleep-regulating circadian rhythm. **MH**

The Cortisol Cycle

Healthy adrenal glands release cortisol according to the circadian rhythm. Learn its ways and control your stress levels



A Levels bottom out between midnight and 4am.

B Rising cortisol wakes you, peaking around 7 to 8am.

C Release spikes in response to eating and stressful events.

D From noon, cortisol release then drops throughout the day.