

- Hormones



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GIVE YOUR ENERGY A BOOST

Feeling flat each morning with no get up and go? It could be your adrenal glands are being overworked often from too much stress and busyness. Female health expert Pippa Campbell shares how you can support your adrenals to feel more energised.

STRESS IS A FACTOR FOR ALMOST all of my clients – and it probably is for you too. Most of the women I see in clinic tell me they've felt under constant stress for years. They may have got away with living this fast-paced, high-pressure life during their 20s and early 30s. But once perimenopause hits, they suddenly find they can no longer do this. In fact, stress is one of the major reasons – along with diet, lifestyle and genetics – that perimenopause symptoms can hit women like a ton of bricks, rather than being experienced as a gradual transition.

What's the stress-hormone connection? When you come up against a stress, your body acts as if you are in danger. The communication system between the brain and adrenals, called the hypothalamic-pituitary-adrenal (HPA) axis, tells your adrenal glands to make stress hormones, including adrenaline and cortisol. These help give you a burst of energy. In evolutionary terms, this response was designed as a short-term fix, just to escape the immediate danger, like being confronted by a predator.

Once the danger has passed, a feedback loop should send a message around the HPA axis to switch off the production of adrenaline

and cortisol. Then, you can return to your recovery or "rest or digest" relaxed state.

However, modern stress – work challenges, ageing parents, children's exams – tend to be more long term, which means that the adrenals will keep on producing cortisol. This is a problem because cortisol is inflammatory. Eventually, the HPA axis will register that there has been too much damaging cortisol hanging around for too long and so, for self-protection, it will scale production right down.

But this causes an even worse problem: low cortisol. As well as being a stress hormone, cortisol is your get-up-and-go hormone. It's supposed to be high in the morning – it gives you that kick to get out of bed – then it should reduce towards the evening, so you're relaxed for sleep. If you don't have enough cortisol, you're tired all the time (if you have cortisol that's too high, you're more likely to feel tired and wired).

The name that used to be given to this was "adrenal fatigue". But in fact, this name is misleading. It's not that the adrenals are exhausted, it's that the communication system between the brain and the adrenals, the HPA axis, has become dysregulated. Treating this HPA dysregulation can help to restore healthy cortisol levels.

SYMPTOM CHECKER

If you tick most of these, you probably have overworked adrenals.

- **FATIGUE** Do you feel tired, even after a night's sleep?
- **NEEDING CAFFEINE** Is it unthinkable to get through the morning without coffee?
- **BRAIN FOG** Do you find it impossible to focus or concentrate?
- **WEIGHT GAIN** Have you gained weight around the middle that's hard to shift?
- **DIZZINESS** When you get up, do you feel light-headed, especially when getting up from lying down?
- **OVERWHELMED AND DOWN** Are you more teary, reactive and less resilient when stressful things happen?
- **SORENESS** Do you have sore muscles and achy joints? Are you slower to recover after exercise?
- **ENERGY CRASHES** Do you find your energy bottoms out in the afternoon?
- **CRAVING SALTY AND/OR SWEET FOODS** Are you unstoppable around crisps and nuts or cakes and chocolate?
- **LOW IMMUNITY** Are you getting sick more often? Are any injuries slow to heal?

SEX HORMONES UNDER STRESS

During perimenopause, the negative effects of the drop in sex hormones are amplified by HPA dysfunction. In your fertile years, you make the most of your sex hormones in your ovaries and some in your adrenals. If you had some adrenal dysfunction in your fertile years, it wouldn't have made much of a difference to your levels of sex hormones. However, over the



course of the perimenopause, as your ovaries wind down as a hormone factory, your adrenals should take over, to make the small amount of oestrogen and progesterone that you need. But when HPA comms are disrupted by stress, this causes three major glitches in your sex hormone manufacturing system.

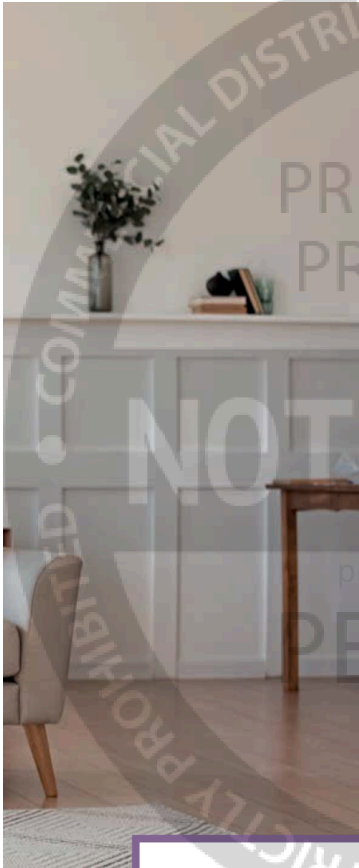
Hormones are made in a cascade, one from another. The raw material for most hormones is cholesterol. It's used to make the grandmother hormone, pregnenolone, which becomes the mother hormone, DHEA, then testosterone and, finally, oestrogen. Mother hormone DHEA is actually made in the adrenals. When you're stressed, your adrenals will prioritise making stress hormones – cortisol – instead of making DHEA, so you won't have the raw materials available to make testosterone and oestrogen. This makes sense: in times of stress, the body prioritises survival over fertility. Also, the raw materials needed to make cortisol are diverted from making the sex hormone progesterone, so you make less progesterone too. Finally, the

production of testosterone and oestrogen in the ovaries has its own communication channel to and from the brain – the hypothalamus-pituitary-ovarian or HPO axis.

WHERE HORMONES ARE MADE

When brain-to-adrenal communication breaks down due to stress, a.k.a. HPA dysregulation, this affects the HPO axis too. Your body doesn't get the signal to make testosterone and oestrogen as it should. There are three key reasons for adrenal dysfunction:

- **CHRONIC STRESS** How would you rate your stress levels? And how stressed have you been for the past 10 or 20 years? Stress comes in many forms. There is the big stuff, such as losing someone you love, losing your job, serious illness, going through a relationship break-up. But there's also the everyday stuff: commuting, life admin, traffic jams, losing keys. When the HPA axis becomes dysregulated in the face of persistent



stress, this can lead to symptoms that affect many of the body's key functions: metabolism, immunity and sleep.

● **A DIET THAT CREATES STRESS**

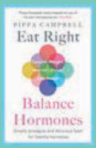

What you eat can either support or undermine your adrenal function. Diets high in sugar and refined carbohydrates can lead to fluctuations in blood sugar levels, which can tax the adrenal glands. Too much coffee can put more stress on the adrenals, as caffeine triggers the release of adrenaline and cortisol, perpetuating a cycle of stimulation and crash. The effect is magnified if you don't get enough of the nutrients your adrenals need – including vitamin C, B vitamins, zinc and magnesium.

● **BAD SLEEP PATTERNS** Cortisol levels should decline to their lowest level during the early stages of sleep, then peak in the early morning to help wake you up. This circadian rhythm can easily be put off track by a variety of factors, from shift work to not

getting daylight, bright lights at night or not going to bed at a regular time. This can then put out your cortisol rhythm, so it stresses your adrenals even more.

You can't stop the hormonal changes of perimenopause; your production of sex hormones is inevitably reducing. But you can look after your adrenal health and so mitigate the negative effects of stress on your sex hormones. This will not only help your hormone levels to be the best they can be at this point in your life but will help relieve your symptoms, too.

Pippa Campbell is a functional nutrition practitioner, naturopath, and author of *Eat Right*, *Balance Hormones* (£14.99, Bonnier Books).

WHAT TO DO...

1 STABILISE YOUR BLOOD SUGAR

Fluctuations in blood sugar can stress the adrenals, so it's crucial to maintain steady levels throughout the day. Fill your plate with a mix of foods that are low on the glycaemic index (GI), which refers to the extent to which blood glucose rises after eating a food. Include protein, fat (nuts and seeds), non-starchy vegetables and greens, legumes and high-fibre, slow-release carbs. Also aim for 30g of protein at breakfast, and include complex carbohydrates in your evening meal, such as starchy vegetables or whole grains.

2 MAXIMISE NUTRIENTS

Eat a colourful diet that's rich in a variety of fruits and vegetables for the widest range of vitamins, minerals and antioxidants. This will give you the building blocks for adrenal hormones. Be sure to include dark leafy greens, berries, nuts and seeds.

3 INCREASE VITAMINS C AND D

The adrenal glands also have one of the highest concentrations of vitamin C in the body and the stress response uses up B vitamins too. Get more vitamin C from citrus fruits, strawberries, peppers and cruciferous vegetables. And for vitamin B, eat meat, liver, chicken, eggs, fish, seafood, mushrooms, lentils, chickpeas, avocado, and leafy greens.

4 ADD HEALTHY FATS

Cold-water fish such as salmon and mackerel, flaxseeds, chia seeds and extra virgin olive oil provide the fatty acids necessary for building adrenal hormones.

5 LIMIT STIMULANTS

Although caffeine, sugar and alcohol may feel as if they're giving you an energy boost, what goes up comes down – they can cause



blood sugar crashes that strain the adrenals.

6 STAY HYDRATED

Dehydration can increase cortisol levels. Aim for two litres of water a day. You can also hydrate by eating high-water foods, such as cucumber, celery and melon.

7 TRY TURMERIC

Stress and high cortisol can be inflammatory to the brain. Turmeric (above), with its active compound curcumin, has anti-inflammatory properties so consider taking a supplement.