

# How hormones affect your shape

They have the power to make us laugh with delight or weep in despair, but hormones are also extremely potent when it comes to the size and shape of our bodies. By Kelly Baker.

THEY SOUND INNOCUOUS enough, but hormones, the chemicals that carry messages from one part of the body to another, are actually anything but. In fact, teeny tiny as they are, hormones are extremely potent, particularly when it comes to the shape of our bodies.

"Hormones determine the rate at which our cells burn up food substances and release energy and thus control the metabolic rate... this is of great importance," says Doctor Sandra Cabot, author of *Hormones – Don't Let Them Ruin Your Life* (WHAS, \$24.95).

As Dr Cabot says, hormones matter. Here, we look at why they matter as much as they do during the various life stages.

## The teenage years

Some time between the ages of nine and 16 girls experience puberty, with the majority entering this period at the age of 10 or 11. As anyone who has been through puberty will be only too aware, this is a period during which hormones – in particular oestrogen and progesterone – make their presence felt.

During puberty, the majority of girls will experience a variety of physical and emotional changes such as mood swings, the growth of hair under the arms and in the pubic

area, an increase in height, a widening of the hips, the development of breasts and along with that, some weight gain. In most cases this weight will be gained in what is known as the oestrogen dominant zones, says naturopath and herbalist Narelle Stegehuis, who specialises in women's weight loss and wellbeing.

"Many girls will gain weight in the back of the arms or around the middle," says Narelle, who heads up the women's health and weight-loss clinic Mass Attack. "They'll likely also gain weight in the hip, thigh and bottom area and, of course, the breasts."

While some girls struggle with their changing bodies, others are delighted. Either way, it is perfectly normal to put on weight during puberty. Girls need to maintain a certain body weight for menstruation to start and continue. But if there's an underlying hormone imbalance involved, these changes

will be considerably more noticeable and possibly problematic, says Narelle. "If a young girl has elevated oestrogen, for example, or Polycystic Ovarian Syndrome [a hormone imbalance that affects menstrual cycles and has been linked to obesity and also diabetes],

she may gain weight very quickly, even if she is quite active and eating healthfully," she says.

If weight is increasing rapidly, despite a healthy lifestyle, it's worth checking in with your GP or health practitioner in order to rule out a hormone imbalance or problem which is causing the body to either under- or over-produce a specific hormone, says Narelle. "If there is a problem now is the time to do something about it."

## The twenties and thirties

By the time you hit your mid twenties to early thirties, your body has undergone many changes. You might have had a baby (or several), or be in the midst of fertility support treatments, both of which affect your hormone levels and contribute to weight gain.

At this age you've also likely begun to lose some muscle mass thanks to less exercise and getting older. This loss of muscle mass is important because muscle burns considerably more calories than fat. Lose the muscle mass and your body's ability to burn energy (in other words, food) decreases. Plus, by now you've probably dabbled in smoking, medications and poor dietary choices. You've also likely suffered some stress and been exposed to a range of environmental toxins and synthetic chemicals. All of these lifestyle factors can affect your hormones.

So once again hormonal havoc can be an issue. The fact is, while your hormones may have played nice during

### Are your hormones out of balance?

The first step is to have an imbalance diagnosed. Your GP or health practitioner can do this by giving you a simple saliva test. Or, they may suggest a urine or blood test. Once you know which hormones are out of balance you can work towards rebalancing them with diet changes, and perhaps vitamins, minerals or supplements.





## Your hormones and how they can make you gain weight

### OESTROGEN

"Oestrogen is manufactured and stored in body fat, which closely links this hormone with weight gain," says Burton Goldberg, author of *Weight Loss – Alternative Medicine Definitive Guide* (AlternativeMedicine.com Books, \$37.95). "When you have too much oestrogen, you convert more food energy into fat. Oestrogen-dominant women tend to retain fluids and salt and crave carbohydrates, which can lead to blood sugar problems and insulin imbalances."

### CORTISOL

Cortisol is a hormone secreted by the adrenal glands. If you're stressed, high amounts of cortisol are released. Chronic excess secretion is associated with obesity and suppressed thyroid function. Naturopath Narelle Stegehuis says increased cortisol effectively puts your body into fat-saving mode. "Stress and weight loss are not compatible," she says.

### PROGESTERONE

Too little of this female sex hormone can be caused by chronic stress, an underactive thyroid or frequent anovulatory cycles (menstruation without ovulation). If progesterone levels are low, women may experience fatigue and a drop in metabolism, both of which can contribute to weight gain.

### THYROID

The thyroid is a gland, not a hormone. But if it begins to malfunction it doesn't produce or release the hormones that stimulate metabolism, causing fewer calories to be burned as fuel and more to be stored as fat. "If your thyroid gland's activity decreases, even a small amount, this can have a dramatic effect on your waistline," says Narelle.

your younger years, at this stage they may do no such thing. "Possibly you've had a hormonal imbalance lurking for some time but you've been managing it through exercise or counting calories," says Narelle. "When you reach your late twenties or early thirties, you're busy trying to juggle a career and family and there's less time to exercise, all of which can affect your thyroid function, slowing down your body's ability to utilise energy. On top of that you're stressed, which causes your body to release cortisol." Cortisol counteracts the role of insulin, resulting in higher blood glucose levels, which can cause more weight gain.

Throughout our lives, the odd extra kilogram here or there is of little consequence. It's possible your body might function, not to mention look better, with extra curves. However, you can avoid hormone-related weight gain if you choose, says Narelle. "As we age, our bodies change," she says. "We can't fight that, but we can remain in great shape and we don't have to starve ourselves to do it."

On the contrary, at this age we might need to eat more than ever. The trick is to be careful about what we eat to keep our hormones at their optimal levels. "It's about knowing what's going on with the body and working with it," says Narelle.



## The prime years

As you approach 50, you're likely to enter peri/menopause. When this happens, oestrogen and other hormone levels, including progesterone, fluctuate widely, largely because the ovaries are beginning to cease working.

At the same time, your metabolism will slow down, meaning your body needs fewer calories to maintain its current weight. In fact, research has shown that while a moderately active woman in her forties needs about 2,000 calories daily, this drops to about 1,800 calories by the time she hits her fifties. Bottom line – if you don't increase your exercise levels or decrease your calorie intake, you will gain some weight. Possibly you don't give two hoots about that, but it is worth thinking about, particularly if the weight is gained around your middle.

Weight gain around the midsection can raise your risk of heart disease, diabetes and several types of cancer. But, there is good news, too. For example, a clinical trial published in the journal *Circulation* in 2001 found weight gain during the menopausal transition is not inevitable and can be prevented by diet and exercise.

"I think a lot of women believe you gain weight at midlife and that's just how it is," says Narelle. "They're told they're in menopause and they have to accept gaining fat, particularly through their middles... but they don't. In fact, you can look amazing in these years, better even than when you were younger."

All it takes is eating sensibly and exercising regularly, explains Narelle, who also recommends various nutrients, vitamins and herbs to keep hormones in check. "It's like a vintage car," she says. "If you don't get it serviced, then it's going to go downhill, but if you look after it then it will look fabulous." ■

## LIKE TO KNOW MORE?

Narelle Stegehuis runs Mass Attack, a naturopathic clinic specialising in women's health and weight loss. Call 1300 133 536 or visit [www.massattack.com.au](http://www.massattack.com.au). The book *Hormones – Don't Let Them Ruin Your Life* by Dr Sandra Cabot (WHAS, \$24.95), is available at bookstores or online at [www.whas.com.au](http://www.whas.com.au).

## Don't like your shape? Blame your parents

Flip through any family photograph album and you'll quickly spot a general theme. After all, blood relatives tend to share physical characteristics. Some families have cornered the market on beautiful porcelain skin, while others are the recipients of the mysterious glossy hair gene. The trait that is often most noticeable, however, is body shape, with whole families tending towards a physical type.

It's possible you and your family share a love of food, but if you do lean towards the curvier side it's not just your grandmother's cooking that's responsible. In recent years, several groundbreaking studies have confirmed our weight and shape is less influenced by our exercise and diet habits than it is by the genes of our parents.

In fact, a study led by Professor Gregory Livshits from the Sackler Faculty of Medicine at Tel Aviv

than 50 per cent of adult weight gain. The choices we make in relation to what we eat and how much, or how frequently we work out, accounts for the other 50 per cent, he says.

Of course, genes and genetic vulnerability to weight gain have not changed during the past few decades and yet as a nation, we're considerably heavier than we used to be. According to figures from the Australian Bureau of Statistics, roughly 60 per cent of all Australians are now classified as overweight or obese. Further, in 2004-05, the number of Australians aged 18 or over who were overweight or obese was 7.4 million. This, says the ABS, is an increase of 2.8 million people over the past 15 years.

These figures make it perfectly clear that when it comes to weight gain, there is more than our genes at play. Professor Romeis suggests

## YOU CAN LEARN WHAT FOODS TO EAT AND WHAT FOODS TO AVOID IN ORDER TO REALISE YOUR GENETIC POTENTIAL.

University, Israel, and colleagues from King's College in London revealed there is a scientific link between the lean body mass of a woman and her genes. Professor Livshits, whose findings were published in *The Journal of Clinical Endocrinology and Metabolism* in 2007, says: "The bad news is, many of our physical features, including our weight, are dependent on our genes. The good news is, women still have an opportunity to go against their genetic constitution and do something about it."

A study led by Professor James C. Romeis of Saint Louis University School of Public Health, US, published in *Twin Research and Human Genetics*, came to a similar conclusion. Professor Romeis says genes account for more

our increasingly sedentary lifestyles, combined with our supersize me diet mentality, are also playing a large part. "While genetic vulnerability has probably not changed during the past few years, environments have," he says.

Naturopath Narelle Stegehuis agrees. She adds that while your immediate relatives may battle with their weight, there's no reason you have to. "You may have a predisposition towards weight gain but you can overcome that," says Narelle. "You can learn what foods to eat and what foods to avoid in order to realise your genetic potential. Just because your mum struggled with her weight doesn't mean that you have to, too."