Sneaky weight gain culprits

Effective weight loss depends on you burning more energy through exercise than you consume via food – right? Not necessarily, says naturopath Tania Flack.

Take my patient Kate, for example. She couldn't understand why she seemed to be putting on weight, despite keeping to the same healthy diet and exercising at least three times a week. Yet over the past year, the 41-year-old had gained six kilos and she felt that her whole body shape had changed: all of a sudden she had lost her slim waist and wasn't fitting into her clothes. She felt bloated, sluggish and exhausted, and came to my clinic desperate to understand why.

So what is going on? Weight problems are incredibly common in Australia, with studies showing that 70 percent of men and 56 percent of women are overweight. With these statistics, it is no wonder that in 2013 the Australian weight loss industry was estimated to be worth a hefty $644 million dollars. While weight problems on a whole are usually related to unhealthy dietary choices, some very common - but little-known - conditions can effectively block weight loss in even the most diligent dieter, leading to frustration and despair.

1 Dysbiosis and leaky gut

The human digestive tract not only breaks down food and absorbs nutrients, it is also home to trillions of commensal and symbiotic microorganisms whose role in human health is the subject of intense scientific scrutiny. In a healthy digestive system, these extensive colonies of bacteria are in balance and assist in the breakdown of food and general workings of the gut. However, these bacteria can be affected by many factors, including poor dietary choices, medications, stress or infection by other opportunistic parasites or bacteria, which can lead to an overgrowth of bacteria in the digestive tract, known as dysbiosis.

Dysbiosis causes low-grade inflammation, which increases the permeability of the gut wall, hence the term 'leaky gut'. Bacterial particles can then escape the digestive tract and enter the circulation, causing low-grade inflammation and oxidative stress. This phenomenon is called metabolic endotoxemia, and is a major factor in weight gain, insulin resistance and obesity. Interestingly, human and animal studies have identified a species of common bacteria, called enterobacter, as being particularly associated with weight gain and obesity. High sugar and high fat diets contribute to bacterial overgrowth in the gut, but while it has been suggested that changes in the bacteria found in overweight individuals are simply due to poor dietary choices, studies have disproved this theory.

2 High stress

Our 'fight or flight' response is designed to get us out of danger quickly by liberating energy stores and directing blood flow to our arms and legs. This is very helpful when we're in actual physical danger; however in the modern world our 'fight or flight' response is more likely to be triggered by work, social or family pressures. Even low-grade stress can activate this survival mechanism, which then signals the adrenal gland to pump out a range of hormones, including cortisol.

Cortisol is responsible for unleashing stored energy from the liver, to be used as an emergency fuel source. But if this extra energy is not used, it is stored as visceral fat inside the peritoneal cavity, packed tightly around the organs. This causes a thickening of the waistline and gives us what is commonly described as a 'muffin top' in women or a 'beer belly' in men. Whatever you call it, it's bad news, as fat packed around the organs increases the risk of cardiovascular disease and is highly inflammatory. Due to the sudden increase in blood sugar from glycogen release, insulin levels rise, which can eventually lead to insulin resistance, yet another major cause of weight retention.

Chronically elevated cortisol levels also decrease our lean muscle mass over time, which in turn reduces our ability to burn fat. It's also thought that chronic high stress can lead us to crave sugary or high carbohydrate foods and drinks (including

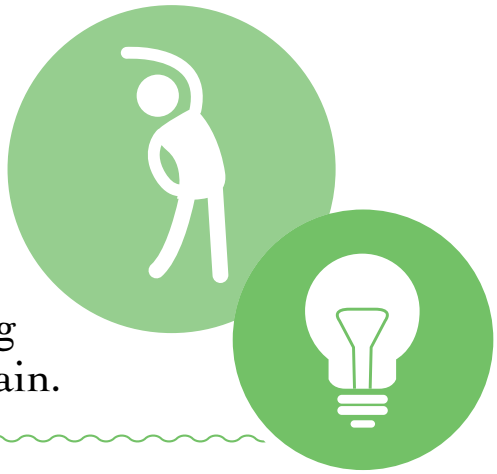
Bug harvest

Human trials have shown that harvesting healthy bacterial colonies from lean individuals and transplanting them into the digestive tracts of overweight or obese individuals actually triggers weight loss and helps to normalise other metabolic markers, like insulin and blood sugar levels. While this sounds strange, the fact is that bacterial imbalance in the digestive tract is very common and rebalancing the gut by using antimicrobial herbal medicines, nutrients, probiotics and a special diet to support ongoing gut health can restart weight loss and result in significantly healthier metabolic function.


H2O

alcohol) to help supply energy into the system quickly to fuel 'fight or flight'. Interestingly, there is also an association between high cortisol levels and leaky gut. Prolonged stress decreases a protective antibody in the digestive tract called secretory IgA. This plays a critical role in immunological defence and mucous membrane health; low levels are associated with leaky gut and dysbiosis, so it is important that both stress and gut health are assessed if weight is a problem.

A family history of type II diabetes can indicate a genetic predisposition to insulin resistance, leading to unexplained weight gain.



3 Thyroid troubles

The thyroid gland has a range of actions in the body but it is best known as the 'master gland' of the metabolism. It is very sensitive and is easily damaged by oxidative stress and inflammation. The predominant cause of underactive thyroid function is the autoimmune condition, Hashimoto's disease. Thyroid problems are extremely common, and while major thyroid disease is relatively easily diagnosed using standard pathology, a poorly functioning thyroid can often cause many symptoms but may be difficult to clearly identify.

Chronic stress is a driver of thyroid dysfunction: it disrupts the hypothalamus and pituitary glands in the brain, which can depress thyroid activity. Inflammation is another major cause of thyroid problems: it can lower hormones that stimulate the thyroid gland and interfere with the conversion of thyroid hormone to its active form. Inflammation can also decrease thyroid receptor site sensitivity, causing symptoms of underactive thyroid.

Herbal and nutritional medicine can be used to support sluggish thyroid function. Interestingly, there is a good deal of synergy between the adrenal and thyroid glands. If stress has played a role in the onset of thyroid problems, supporting adrenal function, while addressing inflammation and oxidative stress, can also help to regulate the thyroid gland.

4 Insulin resistance

Insulin is a hormone secreted by the pancreas, and its main function is to escort glucose into cells so we can store energy. Insulin resistance develops when the cells become less sensitive to insulin, decreasing glucose storage in the cell and increasing glucose in the circulation, which ultimately leads to weight gain and increased fat mass. A family history of type II diabetes or polycystic ovary syndrome can indicate a genetic predisposition to insulin resistance, although it can also develop in individuals with no family history. It is more likely to occur in sedentary, overweight individuals who have a high carbohydrate intake. Signs and symptoms of insulin resistance include: weight gain, difficulty losing weight, poor concentration, high blood sugar, intestinal bloating, fatigue, increased hunger, and low mood. Ironically, the treatment for insulin resistance is achieving and maintaining a healthy weight, something that can be very difficult to achieve without professional help. Core treatment strategies include a low glycaemic index diet and a combination of resistance and cardiovascular exercise.

5 Perimenopause

Most women experience weight gain in the lead-up to menopause - but when does this start, and why? The term 'perimenopause' describes the stage in a woman's life when hormone levels start to change, and this can happen any time between the ages of 35-55. Women at the younger end of this age range, especially those with regular periods, may not necessarily consider fluctuating perimenopausal hormone levels as a cause of weight gain. However, identifying it early means strategies can be put in place to minimise weight gain.

We know that as the level of oestrogen produced from the ovaries decreases during perimenopause, the body compensates by increasing the conversion of a different type of oestrogen that is derived from the fat tissues. This is thought to trigger the body to slow fat loss. Research has also identified other ways that decreasing oestrogen levels contribute to weight gain. For example, oestrogen receptors in the brain serve as a 'master switch' to control weight, and studies on adult female rats demonstrate that sudden drops in oestrogen levels cause the animals to gain a significant amount of weight. The key to successful weight management at this stage of life is to identify hormonal changes early, keep active and support hormones so the effects are minimal.

If you are having trouble losing weight, see your health practitioner. A full metabolic assessment will help provide you with a clear way forward.

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How stress makes you fat

High stress results in increased cortisol, which has four distinct effects – none of them good for weight control:

- Increases visceral fat mass, creating weight gain around the middle
- Decreases muscle mass, which leads to slower metabolism
- Contributes to insulin resistance
- Weakens the gut wall and contributes to leaky gut