

## **The Stress Connection**

(extracted from *Balancing our Hormones Naturally* by Patrick Holford)

Whenever you take in a stimulant such as coffee or a cigarette, or react stressfully to an event, the body produces the adrenal hormone "cortisol". This competes for receptor sites with progesterone. So the net effect of being permanently in a stressed or stimulated state is less active progesterone. Since cortisol also increases the production of oestrogen, prolonged stress can contribute to oestrogen dominance. Normally the liver can easily deal with slight excesses of oestrogen, if, however, a person's diet is poor, or they have allergies, or take in excessive toxins, the liver's ability to detoxify and eliminate oestrogen can be impaired.

Stress also upsets the balance of the male hormone (testosterone), also made in the female adrenal glands. A disturbance of both male and female sex hormones can lead to a lack of ovulation and the development of excessive facial hair and other male characteristics.

The result of constant stress or a diet too high in sugar and refined carbohydrates, is an inability to keep blood sugar levels stable, known as dysglycemia. When blood sugar levels shoot up, after sugar intake, a stimulant or a stressful reaction, the body has to produce more insulin to get the sugar out of the blood and into the body cells. When the blood sugar level is too low this stimulates the adrenal hormone cortisol. This sort of disturbed hormone balance has many knock-on effects on our health, including greater risks of PMT, PCOS, and an under active thyroid.

This pattern of dysglycemia, with raised levels of insulin and cortisol is known as "syndrome X" and increases the risk of inflammatory health problems.

## **Stress and Weight Gain**

Syndrome X may also be the reason why some women experience weight gain despite no apparent increase in calories consumed.

Hormone imbalances brought on by the wrong kind of diet, lifestyle and exposure to hormone-disrupting chemicals, can also lead to either an androgen dominance or oestrogen dominance. Excessive androgen levels are now being linked to upper body and waist weight gain (apple-shaped, blood sugar problems, syndrome x), while high oestrogen levels are with lower body weight gain (pear-shaped).

## **How can a low GI diet help weight control?**

(extracted from *The 7 Day GL Diet*, by Nigel Denby)

Foods that contain carbohydrates have an effect on our blood glucose (blood sugars). This effect is measured as the "glycaemic response". A food that will make our blood glucose level rise quickly is classed as high glycaemic, whereas a food that has little or no impact on our blood glucose is low glycaemic.

When we eat high-glycaemic carbohydrates we get a rapid rise in blood glucose or a "spike". This prompts our pancreas to produce insulin. This hormone comes rushing in to flush out the glucose from our bloodstream as a safety mechanism and carries it to our liver and muscles, where it is stored as energy for later use.

The muscles and liver fill up very quickly, especially if we are not doing a lot of exercise to use up this stored energy. When the muscles and liver are full and can't store any more

glucose, the only thing insulin can do is transfer the excess to other body tissues – this is stored as fat and becomes those awful wobbly bits!

Once insulin has dispersed the glucose from our blood, the spike in blood glucose falls rapidly. This is a vicious cycle as the rapid fall prompts us to crave more high-glycaemic foods!

If we eat low-glycaemic foods, we store less excess energy and blood glucose levels are kept stable. This gives a slow-release, prolonged energy supply, enabling us to go about our activities with fewer cravings, feeling more balanced and ultimately storing less fat.

