



## What is BioSignature Modulation?

BioSignature Modulation is a non-invasive assessment technique based on research that our body shapes and where we store our body fat are a reflection of a number of different hormone levels.

We are becoming increasingly aware of the role hormonal balance plays not only in body shape but in all aspects of health and disease, therefore a technique which can help us measure this can be extremely useful.

It can help to highlight not only where improvements can be made to nutrition - for example blood sugar imbalances - but also lifestyle issues that may be affecting the individual, such as poor sleep or stress. All of these factors have a knock-on effect to overall health and well-being and performance at work.

This individualised assessment approach means we can tailor our nutrition, exercise and lifestyle advice to each person, which yields better and faster results. It also serves as an excellent tool for monitoring progress and maximising adherence

The assessment itself involves taking precise measurements of fat stores at 12 sites around the body using skin-fold calipers. The measurements are entered into our software which compares the sites and calculates the relative values, which have been shown to correspond to specific hormone levels.

Here is a summary of the body's fat storage areas that we measure and their corresponding hormone influences:

### **Pectoral (upper chest) and Triceps**

*Androgens: a group of hormones primarily involved in male traits and reproductive activity, although females have the same hormones in much smaller amounts. If these readings are high, your androgen levels may be low.*

### **Subscapular (mid-back) and Supra-Iliac (on top of the hips)**

*Insulin: this is one of the main fat storage hormones as it controls blood sugar. If these measurements are high, your current intake of sugar and carbohydrates is higher than you are suited to. "Insulin sensitivity" can be improved more through resistance training than cardio training. Luckily, the site on top of your hips responds very quickly!*



### **Mid-axillary (side of your rib-cage)**

*Thyroid: this is involved in regulating all sorts of functions, including metabolism. The higher this reading, the poorer your thyroid function is likely to be. This can often be dramatically improved through lifestyle changes.*

### **Umbilical (stomach)**

*Cortisol: this is like a low-grade adrenaline, released in response to any type of stress – work, family, relationships, bereavement, lack of sleep, excessive alcohol, stimulants such as caffeine, or food choices that don't suit us. If we are exposed to any of these (and who isn't?) over a considerable period of time, we store more fat on our stomachs. There is also evidence that this is linked to internal fat storage around our organs, so managing this is a major health consideration as well as an aesthetic one.*

### **Knee and Calf**

*Growth hormone: this helps controls cell growth, regeneration and repair and has a major role in fat burning. A high calf measurement can mean low levels of growth hormone. One of the biggest lifestyle factors affecting this is sleep. If you don't get enough, or you don't sleep deeply enough, you will struggle to lose weight or fat.*

### **Quadriceps and Hamstrings (thighs)**

*Estrogens and toxins: these can be related to things we ingest either knowingly, such as medications, or unknowingly, such as chemicals or toxins in the air, food or water, or from substances we apply to the skin such as cosmetics. We work with our clients to pinpoint possible sources then support the body's natural detoxification systems.*

From each individual's profile, a coach will work in partnership with them to create a progressive, step-by-step plan looking at nutrition, physical activity and supporting lifestyle changes, the overall aim being sustainable, long-term behaviour changes.

The great thing about working in this way is that by helping restore a natural balance, not only will people's body change shape but they will see continual improvements in all aspects of health and performance, such as energy, better focus, a stronger immune system as improved ability to handle stress as well as feeling happier and more confident.

In a company the case for improving well-being is clear: if leaders and teams are fitter and healthier, the benefits are multiplied; they are in a better position to deal with both the physical and physiological consequences of pressure and stress. They are also likely to have a more positive outlook. It is not surprising that there are countless high profile examples of business leaders who choose to invest in the health and well-being of their teams.



Within a team or organisation, the data from the BioSignature assessment gives us quantitative data to support qualitative data that may already exist or that we can gather around stress, resilience and performance. It can also be used to identify common issues from which we can plan a programme of seminars workshops to support.