Hormones Affecting Your Health & Fat Loss

By Darren Bain

www.functionwell.com.au
Where do I start in explaining Biosignature Modulation?

Probably the first thing to do is explain who created Biosignature Modulation, the creator of this amazing method is world renowned strength coach Charles Poliquin. Charles is a world renowned strength coach, his record speaks for itself; He has designed workouts for Olympic medalists in 17 different sports, world record holders in 10 different sports and professional athletes in NBA, NFL, NHL, MLB and English Premier League. He has also consulted for a variety of high profile organisations such as the US Secret Service, Walt Disney Corporation and the World Swimming Congress so it's fair to say he knows what he's talking about.

BioSignature was originally designed to enhance athletic performance, it is now well documented that Biosignature is also beneficial for the general population as a very effective fat loss and health improvement method.

In a nutshell we want to get our hormones balanced, promoting the hormones that promote fat loss and improved health & decrease the hormones that promote fat accumulation and poor health.

Discover the Power of Hormones

In theory it’s clear to see that where someone stores their body fat in certain areas of the body is a reflection of a hormonal issue(s), for example a male with 'boobs' it's obvious there is an estrogen problem, or it's well documented that someone with excess body fat on the stomach has a cortisol issue. But it takes someone of Charles's intellect and experience to identify other key areas of an individual’s biochemical and hormonal make-up to formulate a system to rectify the problems. This is done by involving protocols of specifically designed supplements, diet, exercise and lifestyle changes to achieve rapid fat loss in your most stubborn areas, improve your energy when you wake up or when you hit that afternoon wall, improve your tolerance to stress from your busy life and environmental toxins, treat menopause, cognitive disorders, insulin control, reduce inflammation, cancer prevention, advanced supplementation for acute/chronic injury, menopause, A.D.D, pregnancy health, sleep improvement and much more.

The science behind BioSignature Modulation has come from skin fold data Charles has gathered over the past 20 plus years that where people store their body fat is an indication of their hormonal profile. He has comparing his data against blood, urine and saliva tests to determine an individual’s specific hormone imbalance.

What's Involved?

Charles has discovered there are 12 sites that need to be measured, 10 of those sites scientifically determine what your hormonal blueprint is. He has developed a system by implementing certain supplements, diet and lifestyle modifications a client can achieve rapid results in fat loss, increased lean muscle and improved health.

Specific hormones dictate where and why the body stores fat. BioSignature Modulation allows the practitioner to safely and naturally fix hormone issues that are not at the optimal level; which leads to improved performance in ALL areas of the clients life; physically, mentally and intellectually.
**Hormones Assessed**

The first 2 sites assessed are the chin and cheek; at this stage they don’t represent anything hormonally. Chin and cheek – overall progress of body fat loss. These fat storage sites usually are the first two sites to show improvement.

<table>
<thead>
<tr>
<th>Skin Fold</th>
<th>Hormone</th>
<th>Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suprailliac, Subscapular</td>
<td>Insulin</td>
<td>Excessive fat gain on the hips (love handles) and upper back tell us how well your body can handle carbohydrates/blood sugar in your diet, the higher they are, the less carbs you should be eating.</td>
</tr>
<tr>
<td>Umbilical</td>
<td>Cortisol</td>
<td>Excessive fat gain on the stomach, disrupted sleep patterns your long term stress levels and exposure to foods you may be intolerant of.</td>
</tr>
<tr>
<td>Quadriceps, Hamstrings</td>
<td>Estrogen</td>
<td>Excessive fat gain on the legs show your current estrogen levels and the amount of estrogen you are exposed to in your environment</td>
</tr>
<tr>
<td>Pectorals, Triceps</td>
<td>Testosterone</td>
<td>Androgen imbalance, accumulated fat on the chest for men these two sites show us how healthy your testosterone (male hormone) levels are. If you have low testosterone you will find it hard to add lean muscle mass and maintain energy levels</td>
</tr>
<tr>
<td>Mid-axillary</td>
<td>Thyroid</td>
<td>Thyroid function accumulated fat half way between your hip bone and armpit. This tells us how healthy your thyroid is and how well your metabolism is functioning overall.</td>
</tr>
<tr>
<td>Growth Hormone</td>
<td>Growth Hormone</td>
<td>Sleep patterns and overall fat loss, your growth hormone levels and quality of sleep. Sleep plays an important role in being able to stay lean and maintain long-term health</td>
</tr>
</tbody>
</table>
Biosignature Applied to the 8 Week Challenge

Using our software we have identified your priority area, after reading through this manual and the seminar will have some key tools to improve your hormonal profile and ultimately your health.

This is just an introduction to BioSignature to get the full benefits it is generally a 6 week or preferably 12 week commitment for best results. With weekly 1 on 1 appointment for 11 weeks, this is done to ensure that the protocol is working as it should and your practitioner can adjust your protocol accordingly to ensure your continued success in re-storing long term health and fat loss.

If you have any hormonal issues that are affecting your fat loss & health I recommend seeing one of our Biosignature Practitioners here at function well listed below for an individualised specific protocol.

<table>
<thead>
<tr>
<th>Name</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Darren Bain</td>
<td>0409877376</td>
</tr>
<tr>
<td>Brian Ellicott</td>
<td>0477117516</td>
</tr>
<tr>
<td>Dan Tewson</td>
<td>0438609819</td>
</tr>
<tr>
<td>Nathan Barker</td>
<td>0422217989</td>
</tr>
</tbody>
</table>

“Biosignature is a revolutionary tool for the clinician who wants to individualise metabolic healing by designing protocols that have the greatest success.”

Suzanne Mack, M.D., North Texas Institute of Functional Medicine

“Biosignature is one of the most advanced non-invasive methods available to rapidly and accurately identify insulin resistance and cardiovascular risks. This allows for on-site effective medical treatment decisions.”

Mark Houston, M.D., M.S., F.A.C.P., F.A.H.A,

Associate Clinical Professor of Medicine (Vanderbilt University School of Medicine)
Director, Hypertension Institute Saint Thomas Hospital Nashville, Tennessee
Are My Hormones Balanced?

You can encourage your body to store or burn fat every day, every hour, every minute by manipulating your hormones. This is done by; what foods you eat, the way you train, manage stress and reducing toxin exposure.

When looking at hormones they must all be in balance, if one is out of balance it is only a matter of time before others are unbalanced.

For you to achieve your Ultimate Physique all hormones must be in balance. Using the Biosignature method it is recommended you focus on improving your priority area first. By focusing on your priority area (as per your Biosignature assessment) initially will generally have a ripple effect to improve other hormones that are affected by a poor diet, incorrect training methods, high stress levels and toxins.

When we look at food as explained in the Introductory Metabolic Switch Plan we need not focus so much on calories but what the hormonal message of the foods we eat are sending. Is the food providing valuable vitamins, minerals, protein and sending a message of satiety and satisfaction or is it producing a huge insulin and cortisol spike therefore sending a message to store fat?

How Do You Know if it’s Your Hormones?

If your energy levels are poor, you are carrying excess body fat that you are having a bloody hard time to lose then you can be sure it’s your hormones. Most overweight people suffer from the same health problems and hormonal havoc leading to low energy, depression, low confidence, cardiovascular disease, type 2 diabetes and many more serious health issues.

Fortunately the lifestyle changes aimed at improving your nutrition, training, stress and toxin elimination that you’ll learn over the next 56 days will help you gain control of your hormones, health and body composition.

The Ultimate Physique Enhancement Plan is designed to raise and lower hormones at the appropriate times to achieve the best result. Hormones are often referred to as a “good” or “bad” hormone. They are neither it’s just that in today’s world our hormones are all out of whack and has our bodies producing too much of one hormone and not enough of another.

This plan is designed to achieve hormonal balance through the release of hormones when they are meant to be released. For example, we want cortisol to rise during a
tough training session, why you ask? This sends a signal to release glucagon and important fat blasting hormones like growth hormone and testosterone.

The post work out supplement shake and nutrition plan is designed to help recovery and shut off cortisol with insulin. Pre workout and during a training session is when we want cortisol not after. Unfortunately today’s society has us in a constant elevated cortisol state.

As you can see by this example there are no good or bad hormones, it’s just a matter of ensuring that they are released when they should be released. Every aspect of this program has been designed to ensure your Ultimate physique is achieved.

Below is a brief overview of each hormone that may be affecting your health and fat loss and what you can do to help you get lean, strong, fit and healthy.
Pectoral and Triceps Priority - Testosterone

What Does It Mean?

High fat storage at the pectorals indicates low levels of testosterone, usually caused by too much of the Aromatase enzyme being produced.

Aromatase will break down testosterone and convert it into oestrogen, encouraging high oestrogen levels and fat storage around the pectorals, hello ‘man boobs’.

A high reading at the triceps will indicate low overall levels of testosterone, not just caused by aromatisation but also not being able to make enough in the first place. The Tricep is the ‘mother’ hormone everything relates back to the Tricep – for males and females. As a female you don’t make a lot of T, but the small amount you do make is critical to your health and body composition.

Low Testosterone Levels

Testosterone is the male sex hormone. The more testosterone you have the more muscle and less fat you will have. Along with helping with an improved body composition it will also make sure your equipment is in working order.

Obviously males have more T than females that’s why males usually have more muscle and less fat than females – well they should anyway and will drop body fat easier than females. This is why whether male or female you want your natural T levels to be where they should be.

Low testosterone level is a major problem in today’s society and should not be treated lightly. The majority of the population have lower testosterone levels than they should; in fact today’s male has dramatically lower T levels than the average male from 50 years ago. All you need to do next time you’re at a busy beach is look at the number of males with ‘man boobs’ to see low T levels are.

The more natural T (meaning what your body will produce naturally) you have the more vitality, strength, power and muscle you will build which in turn means less fat. If you are not producing enough T and the T you are producing is being converted into estrogen due to excess aromatase enzyme being produced you will always struggle to get in shape, perform your daily tasks with energy, not to mention your bedroom tasks.

How Do You Know If You Have Low Testosterone?

This decrease in androgens is commonly referred to as “male menopause”. If your testosterone levels are below the normal range you will experience:

- Low sex drive
- Erectile dysfunction
- Depression or increased irritability
- Fatigue
- Low levels of strength and muscle mass
- Inability to concentrate
- Decreased bone density; osteoporosis
What You Can Do To Fix Low T Levels

In most cases improving a poor diet is usually the first step, this includes alcohol. Excess alcohol increases aromatization.

Switch to a Paleo style diet – emphasising organic and naturally fed meat, fish, green vegetables and healthy fats.

▲ Avoid processed foods.

▲ Up your intake of healthy fats like nuts, seeds, olive oil, coconut oil and supplement with fish oils. This will both help to stabilise blood sugar and increase testosterone production.

▲ Up your overall intake of good quality red meat (grass fed). This will help you to increase testosterone naturally, by giving your body the right fats to balance hormone production. T is derived from cholesterol there is no other way for your body to produce it.

▲ Perform high intensity strength sessions with weights and sprinting.

▲ Don’t train over 60min

▲ Compete in something regularly

▲ Get good quality sleep

▲ Get 10min-20min of Vitamin D (sun) per day or take a vitamin D supplement

Supplements that can help Aromatase Enzyme & Increase T

A good quality zinc supplement should be the first step. studies on zinc benefits
DIM will help to detoxify oestrogen and also inhibit aromatase production
Green tea extract can also inhibit aromatase production
Testolibre – Designed to biologically free up testosterone to put you in a more anabolic state

For stubborn fat storage and low T levels a full cycle of supplements is recommended to help reduce oestrogen, see myself or one of our Biosignature practioners

Relative Articles:

The Testosterone Response: Get Anabolic

The Meat and Testosterone Connection
Mid-auxillary – Thyroid Health and Function

What Does It Mean?

Fat storage at mid-axillary (side of the rib cage) site indicates how well your thyroid is functioning.

Your thyroid gland is located in your neck, just behind the adams apple area and is responsible for regulating your metabolic rate. To burn fat you must have a healthy thyroid.

A high reading will indicate that your thyroid is not functioning as well as it should, this can be down to a number of reasons and can include heavy metal or plastics toxicity. There are many symptoms of a sluggish thyroid. Here are the most common:

- Cold hands and feet
- Water retention
- Puffy eyelids in the morning
- Depression and mood swings
- Dry skin
- Fatigue
- Thinning hair
- Loss of outer ends of eyebrows
- Lower than normal body temperature

What can you do to improve it?

Thyroid function is affected by many of the other hormones in the body, so aiming to get them balanced should be a priority.

- Switch to a Paleo style diet – emphasising organic and naturally fed meat, fish, green vegetables and healthy fats such as nuts and avocado. A diet low in carbohydrates will mean there is less insulin being produced which can disrupt thyroid function if excessive levels are present.
- Avoid all sugary and refined carbohydrates – again these will stimulate excessive insulin to be produced and disrupt thyroid function.
- Remove any exposure to heated plastics or heavy metals. Also avoid using teflon coated griddles and pans and opt for ceramic coated versions.
- Adopt a healthier lifestyle overall – by improving diet and exercising regularly you will reduce the factors that can affect the health of your thyroid gland.

- If you have unresolved thyroid issues it is recommended you get your thyroid tested. Most Doctors will test only your TSH levels, ask for an extensive thyroid test to get the full picture.

Supplements that can help

Zinc, magnesium and fish oils are common nutritional deficiencies that can be supplemented to bring a range of health benefits that aid rebuilding thyroid health.
Umbilical Priority – Cortisol and Stress

What does it mean?

Your umbilical (next to the belly button) reading indicates the long-term levels of cortisol (stress hormone) in your body.

In most cases it is chronic stress and/or diet – having a diet that promotes unstable blood sugar and thus stresses the body. Eating too much carbohydrate and having long gaps between meals or a low calorie diet can contribute to this.

It can also be an indication of food intolerances you are not aware of. A diet diary is an extremely valuable tool in helping identify possible problem foods.

What Is Cortisol?

Cortisol is a low grade adrenaline produced in the adrenal glands and is part of our “fight or flight” response. For example if you were being chased by a lion your body would respond with a hormonal flood of adrenalin and cortisol to help you tap into your energy reserves.

Cortisol should be released in a cyclic manner with levels being highest in the mornings and tapering off throughout the day. The problem is with today’s society we are continuously in a low-grade ‘fight or flight’ response due to different stressors in our lives. Unfortunately most 21st century stressors don’t require the same life threatening energy demands that our caveman ancestors faced but the body still responds the same, with a rise in your blood sugar and fat. High stress not followed by physical activity increases cortisol followed by insulin – this constant release of cortisol and insulin is a one, two punch combo for body fat storage particularly in the mid section.

The natural cortisol curve is to have high levels in the morning and low levels at night, the problem is today’s society often has us continuously in a low grade fight or flight response without the physical activity.

Cortisol will eat away at muscle and increase fat storage along with messing up your cognitive ability – so if you’ve been suffering from brain fog, impaired memory and a spare tyre around your stomach, it’s time to start looking at what you can do to reduce cortisol. If you don’t excess prolonged cortisol levels can lead to numerous serious health issues:

- Impaired cognitive function
- Increased abdominal fat, which is an indication for increased risk of heart attacks, strokes, the development of metabolic syndrome, higher levels of “bad” cholesterol (LDL) and lower levels of “good” cholesterol (HDL),
- Suppressed thyroid function
- Blood sugar imbalances such as hyperglycemia
- Decreased bone density
- Decrease in muscle tissue
- Higher blood pressure
- Inflammation
- Poor immunity
How to Improve High Cortisol Levels

Diet is very important for many obvious reasons, but specific to cortisol it’s important to have stable blood sugar and avoid food intolerances.

- Switch to a Paleo style diet – emphasising organic and naturally fed meat, fish, green vegetables and healthy fats such as nuts and avocado.
- Improve Sleep quality & quantity
- Keep a diet and sleep diary everyday
- Completely remove gluten & dairy from your diet. Gluten and dairy are the 2 biggest food intolerances and can be very inflammatory inside the body contributing to a wide range of issues that will stress the body.
- Avoid all sugary and refined carbohydrates to help keep blood sugar stable
- Don’t do excessive aerobic activity
- Implement some form of ‘Yin’ exercise; yoga, stretching, meditation etc

Supplements that can help

There are many specifically targeted supplements for different stress profiles, I recommend talking to myself or one of the Biosignature coaches for the correct cortisol supplements specific to you and your stress profile. Below are the foundation supplements for cortisol.

**Fish oils** will help keep blood sugar stable and in turn reduce the stress on the body.

**Zinc** – A study conducted called "Zinc Acutely and Temporarily Inhibits Adrenal Cortisol Secretion in Humans" by J. Brandao-Neto et al in the January 1990 issue of the journal "Biological Trace Element Research", studied 27 young adults, 13 of whom were administered zinc orally. The other 14 received saline solution intravenously. Cortisol levels were monitored in blood samples in both groups and a acute drop in cortisol was detected in the zinc group for the whole 240 minutes of the trial.

Read more: [Supplements to Block Cortisol](#).

**Magnesium** is invaluable in mitigating cortisol response from the sympathetic nervous system, helping to stabilise blood sugar and improving sleep.

Recommended Reading:

[ Fish Oils Lowers Cortisol & Increases Fat Loss](#)

[ Seek Serenity](#)

[ Yin Builder Q & A](#)
Sub-scapular and Supra-illiac Priority – Insulin sensitivity

What Does It Mean?

Your sub-scapular (just below the shoulder blade) reading is an indication of how well your body handles insulin in response to eating carbohydrate; it’s also been linked to heart disease and is a genetic marker of carb intolerance.

If this is your number one priority it is crucial you change your lifestyle immediately as a high reading here can also be used as an indication of developing diabetes and other long-term health complications (metabolic syndrome). Effectively this site is an indication of your long term diet abuse.

Your supra-illiac (just above the hips) reading indicates how much carbohydrate is currently in your diet. The cleaner you keep your diet and the more you stick to your nutritional plan, the quicker this site will come down. This sum will go up and down relative to your carbohydrate intake.

If one or both of these sites are high it simply means your ability to tolerate carbs is impaired, this means as Poliquin says “carbs are not your friend they are making you fat”. If you are lean and healthy and these sites don’t come up as a priority your insulin sensitivity is good and you will be able to tolerate a small to moderate amount of carbohydrates. If you are lean and have exceptional insulin sensitivity you will be able to tolerate a larger amounts of carbs. The leaner you get the more carbs you can have.

What You Can Do to Improve?

Diet plays a massive role in reducing these two readings, as a diet rich in refined carbohydrates will cause both to go up

- Switch to a Paleo style diet – emphasising organic and naturally fed meat, fish, green vegetables and healthy fats such as nuts and avocado.
- Completely remove gluten from your diet
- Avoid all sugary and refined carbohydrates.
- Up your intake of healthy fats and supplement with fish oils. This will help to stabilise blood sugar levels and insulin production.

Supplements that can help

- Fish oils will have a dramatic effect in helping your body to control insulin in response to meals.
- Magnesium will help your body to become more insulin sensitive
- Zinc will help digestion and along with magnesium will help improve sleep – another that factor that will effect insulin sensitivity

Glucose Disposal

Grainless Fibre source - will blunt post meal insulin and glucose levels. Aim for 30g in divided doses, implement slowly.

Recommended Reading
Poliquins Top 5 Carbohydrate Rules
Quads and Hamstrings Priority – Estrogen

What does it mean?

A high hamstring reading indicates a high level of exposure to environmental estrogens and a poor ability to detoxify them once they are inside the body.

A high quad reading indicates that your body is producing too much oestrogen.

What Can You Do To Improve?

You want to keep blood sugar stable and avoid eating any foods that will expose you to environmental estrogens.

- Switch to a Paleo style diet – emphasising organic and naturally fed (meaning a diet that is natural to them) meat, fish, green vegetables and healthy fats such as nuts and avocado.
- Eat green leafy vegetables at least 3 times a day. Cabbages, spinach leaves, broccoli, kale, bok choy etc. All help your body to excrete excess oestrogen in your body.
- Go through all toiletries and cosmetics and remove any that contain parabens or a derivative of paraben (methylparaben, ethylparaben, propylparaben, butylparaben) and switch them for alternatives that don’t contain parabens.
- Drink filtered tap water and avoid plastic bottled water to reduce exposure to xenoestrogens.
- Avoid all tinned food.

Supplements that can help

- DIM, Ubersulforaphane and Calcium-d-glucarnate are all powerful supplements that will help support your body in excreting oestrogens from your body.
- Estro-clear is more gentle approach to detoxification and can help relieve issues associated with menopause.
- For serious issues, a full blown oestrogen detox may be recommended. A Biosignature coach will provide you with more detailed information.

Recommended Reading

Addressing Estrogen for Stubborn Leg Fat

Addressing the Challenges of Estrogen

Dealing With Estrogen
Knee and Calf Priority – Growth hormone and toxicity

What does it mean?

Fat storage at the medial calf and knee indicates a low level of growth hormone and can be related to poor sleep.

Guys and girls you will never get lean if your body is not producing enough growth hormone.

The calf reading is also an indication of overall toxicity and can go up as your body begins breaking down toxins stored in your fat cells.

What Can You Do To Improve?

Improving the quality and quantity of your sleep needs to be a priority

▲ Switch to a Paleo style diet – emphasising organic and naturally fed meat, fish, green vegetables and healthy fats such as nuts and avocado particularly before for dinner. This will reduce the possibility that unstable blood sugar levels are causing the sleep disruption

▲ Avoid all sugary and refined carbohydrates – especially before bed as these will cause your blood sugar levels to crash during the night and cause you to wake up.

▲ Keep a sleep diary. Waking up regularly between certain hours can indicate what issues that are preventing you from quality sleep.

▲ Lift Weights and structure your conditioning sessions to produce lactic acid

▲ Sleep in a bat cave. Aim for total darkness in the bedroom (including switching off all standby lights) as even low levels of light can disrupt your sleep patterns. NO MOBILE PHONES!

Supplements that can help

**Zinc** and **magnesium** will both help to improve sleep, especially if you add a topical magnesium cream as well.

Fish oils will help boost serotonin (happy and relaxed hormone) and reduce cortisol (stress hormone) in the evening, making it easier to get to sleep quickly

In some cases your coach may need to recommended herbal adaptgens to help balance out cortisol during the day, reducing the impact it will have on you when you try to sleep

**Alpha GPC**