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# THE STUBBORN FAT SOLUTION

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GRIP T



# STUBBORN FAT

**FAT LOSS** comes down to a combination of the right nutrition, complimented by the appropriate training regime that's reflective of the goal in mind. This is no secret...

With that being said, fat loss certainly isn't linear. If you're on the larger side, you have a greater amount of fat mass to be lost. As fat mass reduces, so will the percentage of lost body fat.

Secondly, with more relevance to the topic, different people lose fat differently. In good physical health, you'll come across some people with lean legs and arms, who have to work and diet extra hard for their abs and backs to become equally as defined. Then there are those lucky individuals who reflect the opposite who tend to always have visible abs even when body fat is slightly higher and have softer looking arms and legs.

This generally comes down to a matter of genetics however it is also influenced by other factors outside of nutrition such as hormones (specifically cortisol), adrenal function, deficiencies, sleep, and recovery.

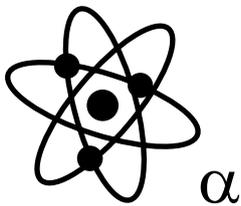
For the general population when we talk 'problem areas' and 'stubborn fat', it's no coincidence that the majority of us share the same issues.



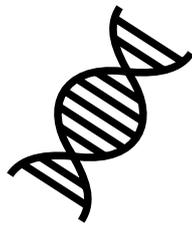
**IN WOMEN**, common areas for stubborn fat tend to be the upper thighs, hips, and upper arms around the triceps. In men it tends to be more obvious around the stomach and lower back.

**I WANT TO KEEP THIS AS SIMPLE AS POSSIBLE.**

The body has two types of adrenoreceptors that sit on top of our fat cells. They are called alpha-2 receptors and beta-2 receptors, both of which react with the hormone adrenaline.



$\alpha$



$\beta$

For the purpose of our understanding, let's think of alpha receptors as the defensive line for fat loss (preventing it) and beta receptors as the offensive line for fat loss (creating it).

Our fat cells have both teams occupying the field, offensive and defensive. The ratio of players (receptors) between the two teams determines the rate of scoring (fat loss).

**ALPHA RECEPTORS = BAD.**

**BETA RECEPTORS = GOOD (B FOR BETTER).**

Therefore, the more alpha receptors stimulated compared to beta receptors, the harder fat loss becomes and vice versa.

**STUBBORN FAT**, is fat tissue that contains a high density of alpha receptors in the one area. To exacerbate the issue, alpha dense areas often have a poor blood flow supply. Without adequate blood flow, you do not get the necessary hormones and catecholamines to the area to mobilise fat and complete lipolysis and lipid oxidation (fancy fat loss jargon).

**LIPOLYSIS:** the breakdown of fats and other lipids by hydrolysis to release fatty acids.

**STUBBORN FAT** releases its fat more slowly due to the type of receptors in the fat cell. Your major fat releasing hormones are the catecholamines - epinephrine and norepinephrine, famously known as part of the “fight or flight” response. If you’re unsure what I am talking about, here is a very quick run down on cortisol and the “fight or flight” response:

**CORTISOL** is a life sustaining adrenal hormone essential to the maintenance of homeostasis. Cortisol is also referred to as our stress hormone. Cortisol is released, as should be, when waking up in the morning, throughout exercise, and from acute stress. Chronically elevated cortisol can have adverse effects on weight, metabolism, thyroid, sex drive, immune function, and chronic disease.

Often explained using an example of being surprised by a Sabre Toothed Tiger during the caveman years, the “fight or flight” response is a temporary increase in energy production at the expense of other processes that are not required for immediate survival e.g digestive system? You’ll have to kill the tiger before you can eat it. Sex drive and hormones?

You sicko. Immune health? Probably not much of a defence in these circumstances.

1. You’re faced with a life or death situation (Sabre Toothed Tiger)
2. Adrenals release cortisol
3. Cortisol prepares the body for its “fight or flight” by flooding it with glucose, supplying an immediate energy source to larger muscles.
4. Cortisol restrains insulin production in an attempt to prevent glucose from being stored, favouring immediate use.
5. Cortisol narrows the arteries while epinephrine increases heart rate, forcing blood to be pumped harder and faster.
6. You kill (fight) or get away from the tiger (flight)
7. Hormone levels begin to return to normal

Although we can be grateful we don’t have Sabre Toothed Tigers preying on us while out gathering food at the markets, the problem in today’s society is the increase in other life stressors, that is seeing our bodies pumping out cortisol in greater levels than ever before. These stressors are coming from things such as work, financial pressures, social expectation, processed foods, and new chemicals exposed since the evolution of industry.

**THE ADRENAL GLANDS MAKE LARGE AMOUNTS OF CATECHOLAMINES AS A REACTION TO STRESS. THE MAIN CATECHOLAMINES ARE EPINEPHRINE (ADRENALINE), NOREPINEPHRINE (NORADRENALINE), DOPAMINE AND ACETYLCHOLINE.**

Be clear on this.

You want to drive cortisol (stress on the body) as high as possible during workouts, but outside of that duration, keeping cortisol low is hugely important when looking to build muscle and burn fat.

**QUICK HINT:** the greater the intensity of exercise, the greater production and release of cortisol and catecholamines.



**ANYWAY...** back to stubborn fat. If you're a woman, I apologise for the following bad news. Women have up to 5 times more alpha receptors than men. Therefore stubborn fat is not entirely your fault and it is harder to get rid of.

**Stubborn fat is more insulin sensitive than other fat cells. A more insulin sensitive fat cell stores more fat and releases less of it.**

Any alarm bells yet?

What causes the rise of insulin?  
**Carbohydrates and sugar!**

Okay **hint number two:** following a low carbohydrate diet and or utilising fasting periods throughout your week will be beneficial on your conquest to reduce stubborn fat by keeping insulin low and preventing alpha receptor stimulation.

Although earlier suggested that high intensity exercise is preferable, I personally prefer to steer clear of high intensity during fasted periods as driving cortisol high with no surrounding nutritional substrate

will likely have negative consequences increasing the breakdown of protein and muscle tissue (catabolic) and therefore reduce muscle mass and metabolic rate.



**The more muscle you have, the more calories you burn.**

When it comes to stubborn fat, insulin is not your friend for multiple reasons. High sugar is a major contributor to leaky gut often a blaming factor with autoimmune diseases. Sugar causes inflammation, disrupts the entire endocrine system and insulin spikes destroy the thyroid gland resulting in a slower removal of insulin from the bloodstream.

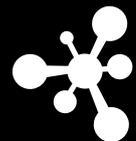
Thyroid activity stimulates beta receptors, and turns down alpha receptors. Anything disrupting thyroid function isn't helping to get rid of stubborn fat.

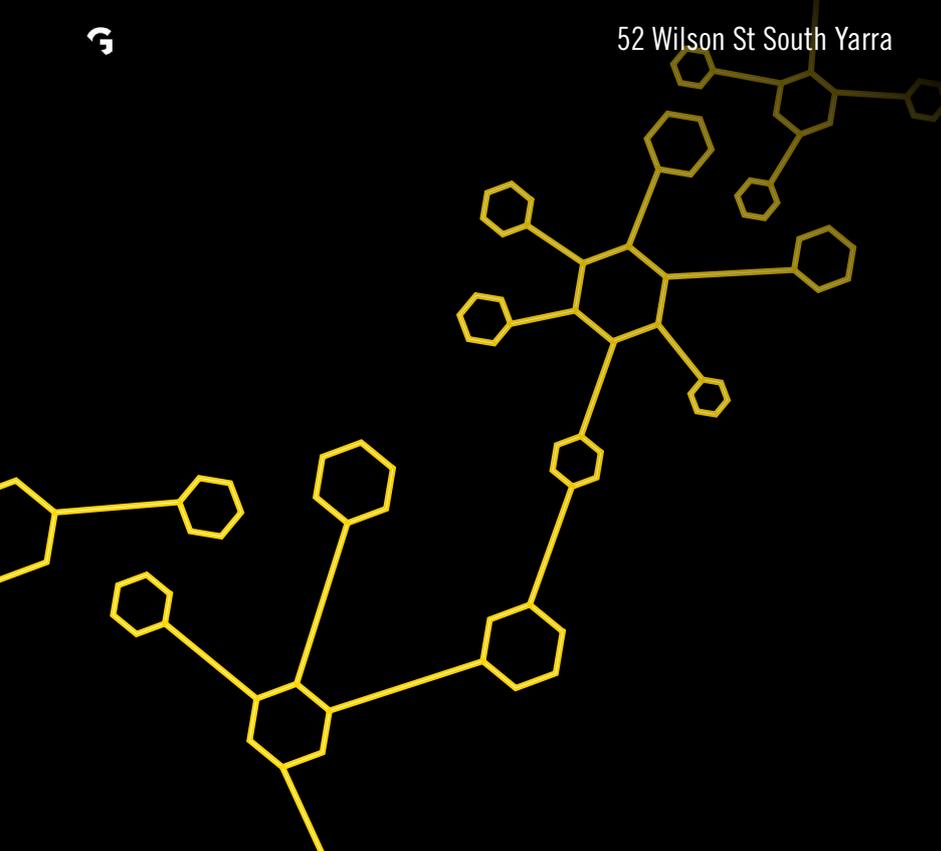
Any alarm bells going off? If you got your hands on a copy of my "The truth behind boosting metabolism" e-book you should know what I am about to say...

**... STAY THE FUCK AWAY FROM LOW CALORIE DIETS!**

**Low calorie diets that range from 900-1200 calories reduce your capacity for fat loss by crashing your metabolism, compromising thyroid function, increasing stress (cortisol) and inflammation in the body and therefore negatively impacting the other health factors previously discussed.**

So what are my solutions to stubborn fat?





# EXERCISE

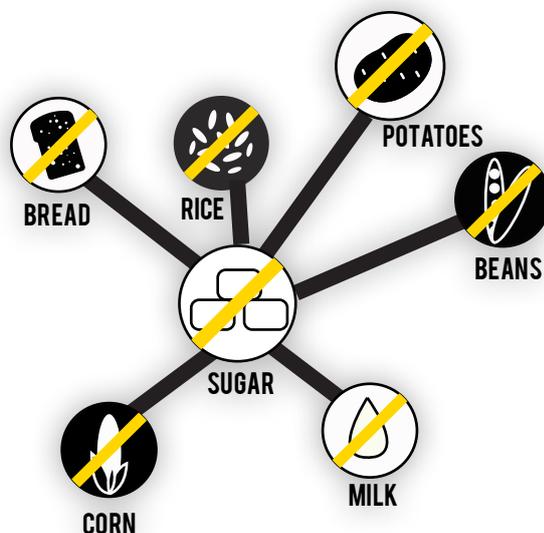
- ☑ High intensity intervals. As you have learned now, the more intensity in which you train, the higher you drive cortisol, the more beta receptors you stimulate. This is why interval training will be your weapon of choice. To maintain a 'sprinting' intensity throughout an entire workout is not realistic. Therefore, be as explosive as possible during work periods, then utilise your short rest periods to recover enough to allow another effort of equal or near quality.
  - ☑ Complete low intensity cardio e.g. walking for 15 minutes after high intensity workouts. The high intensity training has promoted blood flow to stubborn fat and stimulated beta receptors. Continuing with low intensity cardio after these workouts will increase the likelihood of oxidising the remaining stubborn fat that has been mobilised in your blood stream. You do not want to go through all that effort only of the mobilised fat to restore itself back in the same area.
  - ☑ Heavy weight training. Sub maximal lifting, using compound exercises like squats, deadlifts, bench press, and other olympic lifting movements are extremely demanding on the nervous system and musculoskeletal system. Training with such weight stimulates beta receptor activity and burns a ton of calories.
  - ☑ Complete low intensity fasted cardio. The easiest way to do this is consume dinner as normal then wake up the following morning and complete a brisk walk for approximately 30-45 minutes. Continue to fast through till lunch time and complete an additional 30-45 minute brisk walk before having your first meal. Remember it is important to keep the intensity of this exercise low as you want to keep cortisol to a minimum to prevent the catabolic affects of muscle tissue breakdown. Fasting naturally produces catecholamines! It is my preference to keep longer fasted days with cardio separate to weight training days. This naturally creates a calorie toggling approach, slowing down metabolic adaptation while dieting and fuels muscles with the nutrients required around heavy weight training.
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# NUTRITION

Follow a Ketogenic diet for a 2 week period to create metabolic flexibility, lower insulin, improve insulin sensitivity, and force your body to use fat for energy as apposed to glucose from carbohydrates. After 2 weeks it is important to re introduce carbohydrates back into your diet to prevent gluconeogenesis. The brain uses glucose to fuel cellular activities. Therefore in a carb-less environment long term the brain has to get glucose from somewhere and stimulates gluconeogenesis. Gluconeogenesis breaks down protein and muscle tissue, converting it to glucose for the brains use. As a result you'll have an extremely insulin sensitive brain, and insulin resistant muscle tissue. Not exactly optimal for improved body composition.

When carbohydrates are re introduced, ensure they only equate to about 20% of total dietary intake and consume them close to your high intensity, and weight training workouts. I do not include fibrous vegetables into this 20% and in fact never even include them if counting calories. I have never met someone who gets fat from eating too much broccoli.

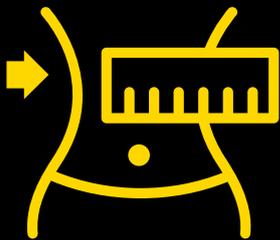
Incorporate a 16 hour fast once or twice a week. Not only will this lower insulin levels, it creates the perfect environment for your low intensity cardio, it has many other health benefits such as cellular rejuvenation and improved digestive function. Again, fasting increases catecholamine hormone levels and can encourage abdominal subcutaneous blood flow. Low insulin levels inhibit alpha receptors and therefore can improve fat mobilisation from stubborn areas.



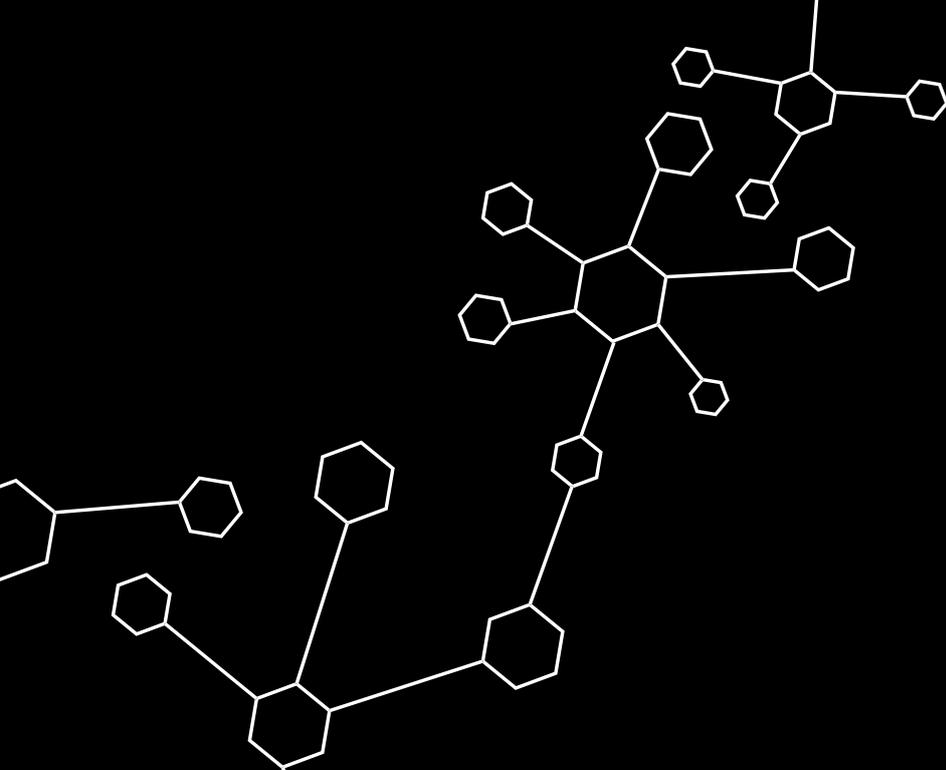


# SUPPLEMENTATION

*It is important to note, no supplement should be thought of as the answer or labelled a magic pill despite what their marketing may tell you. I always explain to my clients, supplements don't work unless you do, and if your nutrition isn't being held accountable, then you're wasting your money. Supplements are great tools, that aid the physical process and give small advantages given everything else is in place.*



1. Caffeine is one of the main ingredients in 'pre workout' and 'fat burner' supplements. More often than not the dosage is the definition of over compensation. Caffeine can stimulate thermogenesis, meaning your body generates heat and energy. Thermogenic effects results in burning more calories. Caffeine is one of the most researched supplements and shows that it might improve muscular endurance, strength, and anaerobic performance.
2. Yohimbine HCL comes from a yohimbe tree named Pausinystalia that grows in Central Africa. Research shows it block alpha receptors and therefore can aid the burning of stubborn fat. Yohimbine HCL can be a beneficial supplement to use before fasted cardio however it needs to be treated with caution as side effects like anxiety are not uncommon. If you are prone to anxiety or panic attacks I would steer clear.
3. Green tea extract (egcg) is also found in nearly all 'fat burner' supplements. Green tea is one of the oldest herbals known to man. The research shows green tea extract can increase fat oxidation and when combined with caffeine has a mild thermogenic effect, hence would be another helpful tool before fasted cardio on your conquest to destroy stubborn fat.

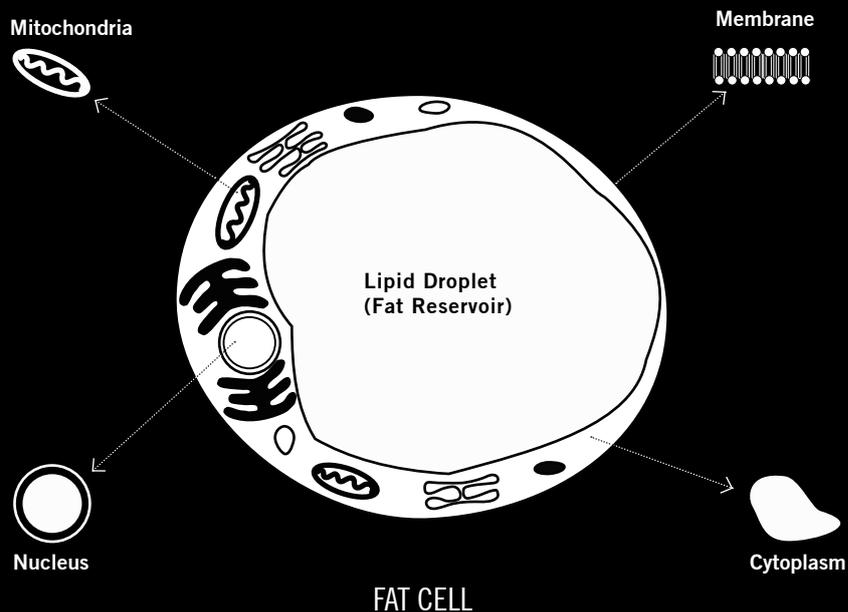


# EXTRAS

As you know now, stubborn fat correlates with poor blood flow. A cheap and easy trick to perform before training, fasted cardio, and infrared saunas is to use a dry brush, and firmly rub the area for 3-5 minutes before hand to improve blood flow and enhance the likelihood of fat mobilisation from stubborn fat cells.

**Infrared saunas have great detox and fat loss benefits. The infrared current oscillates and mobilises fat from fat cells. To reek the rewards, you'll need to oxidise the fat by completing 10-15 minutes of low intensity cardio after your sauna.**

Fat cells are like warehouses for toxins. This is where detox benefits can be taken advantage of from infrared sauna use, however that is a fairly complex topic to fully understand separate to this brief explanation.





# COMMON MISTAKES

## MISTAKE #1

Low calorie diets. Metabolisms are adaptive machines, they rise and fall with calorie intake. Not fuelling your body with adequate protein and fats especially will see your metabolism fall through the floor and thyroid function down regulate leaving you with little to no capacity for fat loss.

To worsen the matter, you'll create a stressful environment for your body, essentially running off fumes. This will result in chronically elevated cortisol and a whole host of holistic problems as touched on in the "fight or flight" explanation.

## MISTAKE #2

Targeting stubborn fat with isolation exercise. The perfect example of this would be doing crunches with the intention to burn abdominal fat. Local site exercise selection will have no impact on reducing body fat from that particular area.

## MISTAKE #3

Performing long cardio workouts like jogging. Longer does not mean more results. Steady state cardio will see heart rate increase to a moderate level where you can continue for a longer duration at that intensity. Stubborn fat requires burst of maximum effort to stimulate

beta receptor activity. If you like running or cycling and want to burn fat, stay away from the marathons and Tour de France emulations and do repeat bouts of sprinting in interval fashion.

## MISTAKE #4

Only training the beach muscles. Don't get me wrong, the evolution of machines and gym equipment in the past decade is fantastic. However relying on machines and isolation exercises like bicep curls simply won't provide the intensity required to stimulate the hormonal response that ramps up fat loss in stubborn areas.

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