

Building Body Confidence

You're a walking representation of your daily habits, so choose yours wisely.



Written By:
James Robertson

Introduction

The fact you are reading this is a huge step towards making change happen and I feel I have already learnt something about you. You are reading this as you are now committed to finally achieving the health, fitness and body confidence objectives that you have craved for so long. Well done you are arming yourself with the best battle armour ready to start this challenge.

I am so happy that you have decided to read this ebook because it allows me to really help you see the wood through the trees when it comes to training success. As the industry is tainted with self-proclaimed experts, with anything related to fitness and dieting.

You do not need to go far on social media or even in the gym to find someone giving out 'broscience' advice to other people around them (bro science is the term used by professionals in the industry to describe those who believe they know everything and like to inform others, their qualifications tend to be a 6 pack). It seems every person you speak to has completed some wonder diet and recommends this to you. From now on I want you to forget all the previous advice you have been given, from now on it's just you and me.



Fat Loss

If your objective is to reduce your body fat and tone up a little then I want you to ask yourself the following. When you look back at previous attempts to achieve long-term sustainable fat loss how did it go? Did you lose weight?

The fact your reading this suggests to me that it did not go to plan, if this is the case don't worry it's not your fault. You have been ill-informed about how to achieve successful and sustainable fat loss so now it's time to correct this. I want you to stop thinking about fat loss/weight loss as a process that takes place about once a month for a couple of weeks, where you follow some branded quick fix diet.

Typically such a diet attempt would last just a couple of weeks, you restrict many enjoyable foods and after just a few days find yourself relapsing and binging out at the weekend. In your own mind, you then attempt to justify this binge by saying those famous words 'I'll start again Monday', sound familiar?

Changing your body composition should not be something that is attempted over and over again, this is literally bad for your long term health, and your waistline. Sustainable fat loss should be one single life-altering journey where the prize is relieving yourself of the burden that comes with low confidence and self-esteem.



Fat Loss

As I said before all failed diets are for one simple reason a lack of knowledge around the process. I want you to realise one important issue with main stream dieting, the creators of the diet WANT YOU TO FAIL! You attend a Slimming club for example, pay your session fee and stand on some scales in front of the group getting weighed like a farmer does to his cattle.

Whether or not you have succeeded that week is determined by if you have or have not lost weight. There is a major issue with this, there are SO MANY variables which affect your weight. Here are just a few:

- Time of the day
- When you last ate or drank anything
- What you are wearing
- For ladies where you are on your menstrual cycle
- Stress levels
- Sleep deprivation

I could go on but I am sure you would rather crack on. The truth is such diets tend to enforce a restriction regime which is not sustainable long term. The diet regime will place you into a calorie deficit which will initiate the weight loss. However as the regime is very regimented it is not attainable long term, as soon as you step away from the diet in 95% of cases the weight creeps back on.

This is due to the fact your daily habits and your attitude towards food have not changed and you no longer feel pressured to succeed as you want to save yourself the embarrassment when it comes to being weighed on the cattle scales. Before you know it, your walking back into your local town hall with your £5 note in hand, ready to be weighed once again as the pressure of social embarrassment is the main motivating factor behind your extreme diet regime.

Remember changes to your body composition should HAPPEN ONLY ONCE!



Increasing muscle size and density.

If your objective is to increase muscle size and density then like the dieters, chances are you to have fallen victim to the bro science education. We are all a walking representation of our daily habits. If you're wealthy and successful then chances are this is because you have been completing tasks everyday, which over a period of time have resulted in the financial success that you enjoy today. Overnight success is extremely rare and although we don't like to admit it, that success has been earned not given. It is exactly the same process when it comes to our bodies, if you perceive yourself as being skinny then this is probably because you currently don't eat enough calories and protein, and do not put enough force through your muscles to require growth. Those people that you aspire to look like however, have made these daily habits a priority and over time like financial success, they can now enjoy the fruits of their labour. We are a walking representation of our daily habits! Please remember this saying as it will help you to focus on days you would rather not.

When it comes to achieving fat loss you need to be in a calorie deficit, you consume 20% less calories than you burn. When it comes to hypertrophy (building muscle) you require a calorie surplus so 20% extra calories than you burn. This is to give you enough fuel to allow for muscular growth and the increase in your BMR (Basal Metabolic Rate). The process required to build muscle is reasonably simple what is hard is the consistency. Unlike the dieters who can see decent results in a matter of weeks, building muscle takes time and you need to accept that you're in it for the long run. Remember there is no such thing as overnight success! As you read through this book you will learn what is required to achieve muscular hypertrophy and the daily tasks you need to complete.

Remember consistency is key! So let's begin the education!



What Are Calories?

As mentioned above whether you are building muscle or burning fat understanding calories and how to manage them is vital and will dictate how successful you are. A calorie is a unit of energy used to create a thermogenic reaction within the body. One calorie is enough to raise 1 gram of water by one degree when heated. Calories are required to fuel what is known as our metabolism through thermogenesis the process of heat production within all warm blooded mammals. The 2 main macronutrients responsible for energy production in the body are carbohydrates and fats. Through the process of digestion carbohydrates are turned into glucose, fat is turned into glycerol when combined with oxygen they both turn into what is known as ATP (Adenosine Triphosphate) or energy. The by-product of this is carbon dioxide and water (what you sweat and what you exhale). Bet you didn't think you would be doing GCSE biology today.

How many calories do I need?

This depends on what your training objective is, your height, weight, age and daily activity levels! As mentioned earlier if you are looking to reduce your body fat then you require a calorie deficit. (Side note: All diets in history are based on a calorie deficit they are just repackaged and branded so they have a product to sell). A typical calorie deficit would need to be around 20% less calories consumed when compared to the calories you have burnt that day. Some extreme diets will have their baseline deficit at 50% which is incredibly aggressive and not sustainable, but we now know why that is! If your objective is to gain muscle then you need a 20% calorie surplus when compared to the amount of calories burnt that day.

How do I work out how many calories I burn a day?

The amount of calories you burn a day or your TDEE (Total Daily Energy Expenditure) can be summarised into 3 areas to keep this as simple as possible, these areas are:

BMR: Your Basal Metabolic Rate is the number of calories your body requires to complete basic functions (basal). These include; breathing, blood circulation, digestion and cell production. Although some may confuse the BMR with the RMR (Resting Metabolic Rate) to keep this process simple we will focus on the BMR. Your BMR will require around 70% of your TDEE so it is important to understand when dieting. To work out your BMR you can use the following Harris-Benedict formula:

Women: $BMR = 655 + (9.6 \times \text{weight in kg}) + (1.8 \times \text{height in cm}) - (4.7 \times \text{age in years})$.

Men $BMR = 66 + (13.7 \times \text{weight in kg}) + (5 \times \text{height in cm}) - (6.8 \times \text{age in years})$.



What Are Calories?

EAT Calories: Eat stands for (Exercise Activity Thermogenesis) and represents the number of calories burnt during planned and completed exercise. The number burnt will depend on your height, weight and age as well as the volume and intensity of your training. An average gym session can burn around 200 to 600 calories depending on the variables although the average is around 300kcal. The number of calories you burn during planned exercise will equate to around 10% of your TDEE, that's it so when it comes to fat loss, your workout isn't actually a hugely contributing factor but it plays an important role in creating the body your after so don't miss it out.

NEAT Calories: NEAT stands for (Non Exercise Activity Thermogenesis) and represents the number of calories burnt during movement however does not include your EAT calories. This would represent the calories burnt during everyday movement including walking, eating, washing up, running up the stairs etc. The number of NEAT calories you burn a day can be a vital component in how successful your fat loss campaign is, the more calories you burn through thermogenesis the more energy production in the body and in theory the more calories you can consume. This process could be called raising your metabolic rate, so focus on your NEAT calories everyday and move as much as you can. When going to the Supermarket, park at the end of the carpark and not in the parent and child zone, while walking to the front door you can say the phrase 'NEAT UP' in your head to justify why you're walking in the rain. The number of NEAT calories you burn can be monitored using a smart watch if you have one. They are not 100% accurate but would be your best method of calculating.

So let's combine of the above into an example.

Bradley is 31 years old, he stands at 177cm tall and weighs 90kg. He has an active job and so will burn a lot of NEAT calories. He also trains once a day at a moderate intensity and burns around 400 calories in the gym. Based on his age, height and weight his BMR is 1856 calories using the Harris-Benedict formula.

So his TDEE (Total Daily Energy Expenditure) is as follows:

BMR = 1856

EAT Calories = 400kcal

NEAT calories = 1000kcal (this is estimated and may need adjusting depending on results)

So Bradley's TDEE is 3256 calories

Fat loss

If Bradley was training to reduce his body fat then he would need to consume a 20% deficit, which would mean his daily calorie intake would need to be 2604kcal.

Hypertrophy

If Bradley was training to increase his muscle size and strength then he would need to consume a 20% surplus, which would mean his daily calorie intake would need to be 3907kcal.



Protein.

What is it and why is it so important?

Proteins are large complex molecules which play a part in many critical roles within the body. They carry out most of the work within our cells and are also required for the structure, function and regulation of the body's tissue and organs. Proteins are made up of hundreds of smaller units known as amino acids which are formed in long chains. Each source of protein will have a different combination of amino acids so it is important to consume around different sources of protein per day (Side note, the word protein comes from the Greek word 'Proteus' meaning 'Primary'. Protein is the most important macronutrient).

Why is protein important when it comes to exercise?

Ensuring you consume the correct amount of protein each day is important when it comes to exercise recovery and increasing muscular size and density. During exercise the role of protein is to boost the body's glycogen stores, promote muscular repair and reduce delayed onset muscle soreness (DOMS) a couple of days after training. Simply without the right amount of protein your body will have little energy, be ill prepared to repair the damage caused during exercise and you will experience painful DOMs after exercise.

How much protein do I need to consume?

Similar to calories this depends on your weight and training objective.

Fat Loss:

For fat loss you will require 1.5g to 2g of protein per kilogram of body weight. If you weighed 90kg then you would require between 135g to 180g of protein per day.

Hypertrophy:

For muscle hypertrophy you will require between 2g to 2.5g of protein per day. If you weighed 90kg then you would require between 180g to 225g of protein per day.

Please download the app 'My Fitness Pal' to help assist you with tracking both your calories and your protein everyday.



Carbohydrates.

Are carbohydrates the cause of weight gain?

Carbohydrates are getting a lot of bad press at the moment with so many social media influencers and commercial diets branding them the cause of weight gain. The reason for this bad press is due to the insulin response that is created as a result of eating carbohydrates.

When carbs are digested they are broken down into glucose and are transported around the blood stream by insulin until they are absorbed and stored with muscular cells to be used as energy. It is believed by many that it is insulin alone that causes weight gain due to the fact it transports and stores. Carb haters will say that the key to losing weight is simply down to controlling your insulin levels, this I'm happy to say is incorrect as the key to fat loss is simply a calorie deficit! I exclude diabetics from this statement as both type 1 and 2 need to pay close attention to their insulin levels and manage their diet accordingly.

When managing your daily calories as long as you hit both your calorie and protein targets, it is irrelevant where the rest of your daily energy consumption comes from, the 2 options being carbohydrates and fats. Neither fats nor carbs are singly responsible for weight gain as this is caused by a consistent calorie surplus (consuming more calories than you burn). So enjoy (but don't go mad on the rubbish stuff, just remember your flexibly dieting, but poor food choices does affect your overall health, so stick with the veg).



Sleep.

Sleep just how much of an impact does it have?

One hugely undervalued area effecting your training results is sleep. For some reason we have become a society that has decided the less sleep you have the harder you are working to be successful. You see trainers on social media bragging how they are up at 4am and going to bed at 12am because they need to be successful.

This in itself is very counterintuitive as being deprived of sleep has many detrimental effects both in and out the gym and will 100% effect the results you want from your training. The American College of Sports Medicine (ACSM) carried out a recent survey into the effects of little sleep on the quality of training and found dramatic results. The experiment concluded that individuals who had no sleep for just 1 night tended to carry out passive activities such as watching TV or reading. When it came to exercise the participants fatigued far sooner than they would normally after a full night's sleep.

The experiment also showed that cognitively their brains were actually instructing their body to stop training when just a small amount of intensity was detected. Not having enough energy to burn enough EAT and NEAT calories would seriously hinder any training results. A lack of sleep also has major effects on the body hormonally. Studies have shown that restricted sleep leads to weight gain and obesity through metabolic and endocrine alterations including decreased glucose tolerance, decreased insulin sensitivity, increased concentrations of cortisol, increased levels of ghrelin (hormone that makes you hungry) and decreased levels of leptin (hormone that tells your brain your full). This is a cocktail for weight gain!

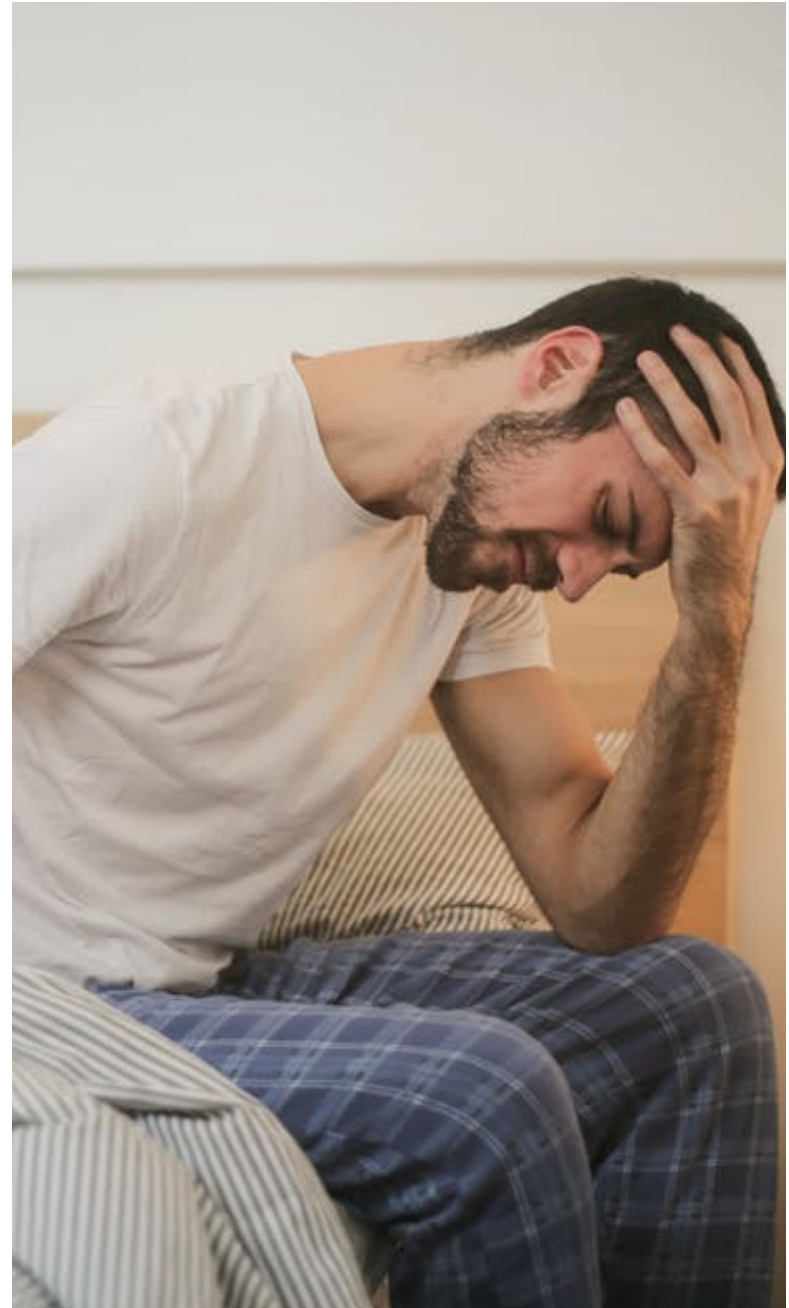
So if you take just one lesson away from reading this make sure you are getting at least 7 hours sleep per night.



Stress.

Ahhh stress now this is the plague of the modern world! Consistent stress year after year is far more dangerous to your health than any disease you are likely to contract. Chronic stress is described as repeated exposure to stressful situations that lead to the release of stress related hormones such as cortisol. There are 3 different types of stress; Physical (running from danger), Chemical (Medication and alcohol) and Emotional (everyday work stress). Looking at the 3 different types of stress we could easily be exposed to at least 2 of those every single day. Stress disrupts every single system in the body, it will affect your immune system, your digestive system it will even effect your reproduction system and we are causing all this damage to ourselves simply to fit into our capitalist society where you either succeed in life or you fail! You may be reading this now and thinking yeh my life is busy but I'm not stressed. This may simply be because you have become accustomed to the feeling of stress, to the point where you don't even notice it. So how can you tell if you are stressed?

1. Feelings of worry or anxiety
2. Difficulty concentrating
3. Mood swings or sudden changes in your mood.
4. Irritability or short tempered
5. Difficulty relaxing
6. Depression
7. Low self-esteem
8. Eating more or less than usual
9. Changes in your sleep habits
10. Aches and pains, mainly muscular tension.



Stress.

The grim reality for many is that everyday stress is unavoidable, you try telling a mum of 3 to chill out while she's attempting to work from home and entertain 3 kids and a husband. We now know the dangers of exposure to high levels of stress everyday and need to take ownership of the fact that the stress is unavoidable but manageable.

It is our responsibility to take control of that management in an attempt to reduce the dangers of this constant exposure. Here are some top tips to help you manage stress;

1. Realise the root cause of the stress and take ownership of this.
2. Start to recognise the warning signs highlighted above and start to manage accordingly.
3. Place the causes of stress into 3 category's,
 - I can do something about this.
 - Its fine I can handle this
 - There's nothing I can do to change or reduce this.
4. Are you taking on to much? If so then can you hand some of the workload to someone else?
5. Are you getting enough sleep?
6. Do you currently allow yourself to process the stress positively through mindfulness or moments of quiet reflection?
7. A healthy body, creates a healthy mind so exercise is a great tool for stress management.



Supplements

Do supplements work?

In short no! This is however with the odd exception. The supplement industry is huge and as many people turn to pills and potions to improve their health, it appears to be growing year on year with an estimated value of £214 billion by 2024. When researching how effective supplements are for improving health and helping to reduce the impact of illness, the results are very conflicting and appear to depend upon who is commissioning the research.

If a supplement company for example commissions research into the effectiveness of multivitamins in improving overall health, they will ensure the end results supports their bias that multivitamins are a dietary supplement which must be taken every day to achieve maximum health.

Any result which conflicts with their bias can literally be bad for business and we can all assume such results would never be published. So when researching such a topic it is important to read between the lines before assuming what has been published is entirely accurate. So let's look at some of the most common supplements for fat loss, hypertrophy and overall health and see if they are worth the investment or simply result in very expensive pee.



Multivitamins

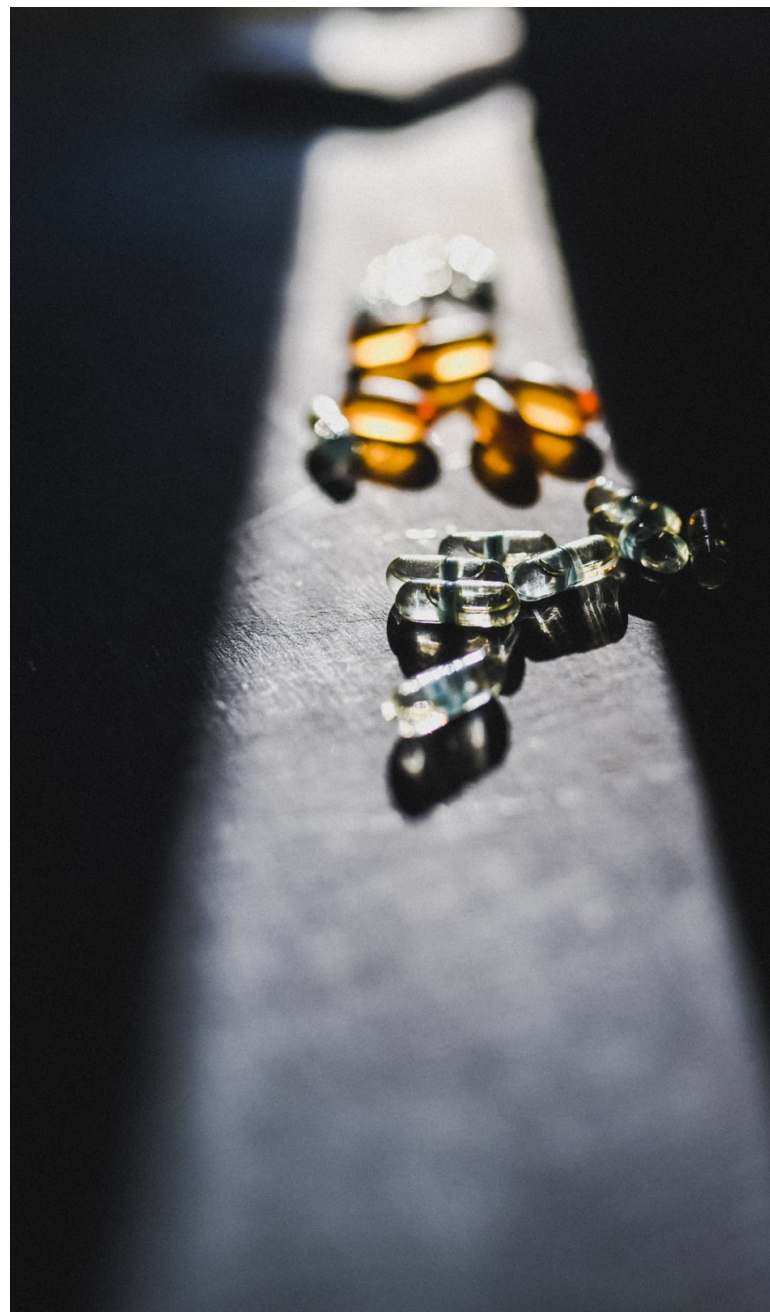
Some of the claims around the health effects of multivitamins are very impressive with many companies bosting that they can improve health, compensate for a poor diet and even reduce the risk of chronic disease including heart disease (the world's biggest killer).

Multivitamins are supplements that contain different vitamins and minerals including both fat soluble A,D,E and K and water soluble mainly B and C. Several studies have been carried out on multivitamins ability to help reduce the cause and effects of certain issue/conditions such as heart disease, cancer and brain function. As expected the results were very conflicting so much so that a correlation cannot be drawn from the results.

What can be agreed however is the danger of consuming too many certain dietary vitamins especially fat soluble ones. Excess water soluble vitamins do not pose a huge threat due to the fact they are excreted through urine and not stored within the body. This is why you get radioactive pee (not literally) a couple hours after taking multivitamins, you are literally peeing away the very product you paid £30 for.

Fat soluble vitamins however are not excreted out of the body, they are stored within the body's tissue and this can in extreme cases lead to toxicity. The only vitamin which is exempt from this is vitamin K due to its very low levels of toxicity. So when combining the fact that excess fat soluble vitamins can lead to increased toxicity within the body, as well as the fact you pee out many of the water soluble vitamins, in my opinion buying multivitamins are not a worthwhile investment I would deem worthy of my money.

If you are taking multivitamins due to the fact you have a poor diet, then this is the main issue and instead of relying on a pill to support you, you need to sort out your overall dietary habits. This is however unless there is a medical necessity for taking particular dietary supplements.



Vitamin D

Vitamin D for is a fat soluble vitamin and so has the potential to cause toxicity when over consumed. However naturally vitamin D is made from cholesterol and UVB radiation (sunlight) within your skin when exposed to sunlight. Vitamin D can also be found in certain foods such as oily fish and some fortified cereals and dairy products. Due to the fact sunlight is required in order for the body to create vitamin D many people, around 1 billion people worldwide are said to be vitamin D deficient due to the lack of sunlight they are exposed to. One of vitamin Ds main roles is to support your immune system and help to fight off any viruses and bacteria which may have entered the body. If you often find yourself becoming ill or are particularly vulnerable to coughs and colds, this may well be a sign that you are vitamin D deficient. Here are some other symptoms of vitamin D deficiency;

- Tiredness and fatigue
- Bone and back pain
- Depression
- Low bone mineral density
- Hair loss
- Muscle pain

As many people especially in the UK are not exposed to much sunlight the only way to ensure you are not vitamin D deficient is to supplement. Vitamin D does also have a best mate vitamin k2 as they work together to protect calcium metabolism. Vitamin D ensures we have adequate calcium levels within our blood stream and promotes calcium accumulation in our bones. So if supplementing please ensure that the product also includes vitamin k2 to maximise the results. Dietary vitamin D and K supplementation would usually only be introduced during times of low exposure to sunlight, such as during winter.



Omega 3,6,9

Omeegas 3 and 6 are known as EFAs (Essential Fatty Acids) as they are not created within the body unlike omega 9. Each omega has a different role within the body;

- **Omega 3:** They are an integral part of cell membranes and affect the function of cell receptors. They provide the starting point for creating hormones and help regulate blood clotting. These fats also help to keep the heart beating at a balanced rate and so they play a key role in the prevention of heart disease. We are not able to manufacture omega 3s within the body so omega 3s are essential fatty acids and need to be obtained from food. They can typically be found in most types of fish but anchovies and salmon are a good source. Omega 3s are worth supplementing on their own if you do not regularly eat at least one portion of fish per day.

- **Omega 6:** They work very closely with Omega 3 in improving brain function, they also help to lower the deadly LDL cholesterol and help to increase healthy HDL cholesterol which actively works to decrease the amount of LDL within our circulatory system. The ratio of omega 6 to 3 should be round 1:4. However as omega 6 is found in most oils including vegetable and rape seed oil our diets tend to already have a sufficient amount of omega 6 within it. We consume so much omega 6 in a western diet that the rations has been known to hit 50:1. We do not need to supplement this and in most people we actually need to reduce the amount of omega 6 we have in our diet so do not supplement. Omega 6 is also an Essential fatty acid as our bodies are not able to manufacture them itself.

- **Omega 9:** Unlike Omeegas 3 and 6, omega 9 is not essential as our bodies are able to manufacture them. Omega 9 fatty acids are also known as a monounsaturated fat and is the most common fatty acid found in most cells within the body. Studies have found that omega 9s have been shown to reduce LDL cholesterol and inflammation as well as to increase insulin sensitivity which is important if you have a poor diet and are sedentary. I wouldn't supplement these, as omega 9s are manufactured in the body and we generally have enough.



Fat Burners

Fat burning pills and drinks boast amazing claims that they can make you skinny, some even say just the pills alone will help you burn body fat. Just a side note weight loss pills are different, these work by achieving a calorie deficit by absorbing any fat molecules within your digestive system and not allowing them to pass through into the blood stream as glycerol. Standard Fat Burners tend to contain one or a combination of the following ingredients:

Caffeine: Caffeine works by stimulating the nervous system and releasing a hormone known as Epinephrine also known as adrenaline into your blood stream. The release of this hormone then signals for fat cells to start releasing stored lipid into the blood stream as fatty acids and then to water soluble ketones. This sounds great right! However releasing fatty acids into the blood stream does not always mean this will be burnt as energy. Whether these ketones are burnt as fuel depends if you are in a positive or negative energy balance. If you have consumed more calories than you burn then these will become restored once the surge of Epinephrine has passed. However if you are in negative energy balance or 'calorie deficit' then these fatty acids will be burnt and used by the body as a form of energy. Studies have also shown that caffeine increases your RMR (Resting Metabolic Rate) by as much as 11% increasing the thermogenic reaction in your body, this means you burn more calories. This process is said to be less effective in obese people.

Catechin: Catechins are phenolic compound antioxidants typically found in Green Tea which is why people say Green Tea helps aid fat loss, they can also be found in cocoa and red berries. The most potent catechin is Epigallocatechin-3-gallate (EGCG). In 2012 a study was carried out in China with 118 Chinese adults of whom all had a high proportion of visceral fat. They were assigned to consume a daily beverage containing 609mg catechin and 68mg of caffeine for 12 weeks. Their abdominal fat area, body weight and composition were all measured at weeks 0, 8 and 12. The results showed that all testing criteria was reduced over the 12 week period. This however would not have been the case if the subjects had not also been within a calorie deficit. So we can take from this that catechin and caffeine work well in aiding fat loss however the primary variable in fat loss success is the ability to remain within a calorie deficit.



Fat Burners

L-Carnitine:

-
L-Carnitine is an amino acid which plays a crucial role in energy production. It helps transport fatty acids into the mitochondria of each cell for the production of Adenosine Triphosphate (ATP) also known as energy. L-Carnitine can be made within the body from amino acids methionine and lysine or taken as a supplement typically alongside CLA. L-Carnitine can also be consumed by eating animal products such as meat and fish. Vegans and vegetarians will typically be low in L-Carnitine and so supplementation would be advised in this circumstance. Due to the fact L-Carnitine helps to pull fatty acids into the cells to be burnt as energy, it would make sense that this then aids total fat loss, sadly the body is more complex than this.

The body has two metabolic pathways the glycolytic and the ketogenic pathways for energy production. If glucose (glycolytic pathway) is present then this will always be the preferred fuel source over fatty acid due to its lower requirement for oxygen compared to the metabolism of stored lipid (ketogenic pathway). Also when looking to reduce body fat through caloric restriction one of your dietary targets will be to consume around 2grams of protein per kilogram of body weight. As long as you are not vegan or vegetarian this will mean your consumption of animal products will increase and so will your consumption of L-Carnitine so supplementation is not required. Recent studies around the effectiveness on L-Carnitine on fat loss resulted in little difference between the group supplementing L-Carnitine and those who were not during an 8 week study including 4 workouts a week.



Fat Burners

CLA:

CLA (Conjugated Linolenic Acid) is a type of polyunsaturated Omega 6 fatty acid mainly found in animal products such as dairy and beef but can also be supplemented. Not all fats are born the same and this is definitely the case for CLA, there are also 28 different forms of CLA.

The word conjugated refers to their double bonded structure, the difference between each form of CLA is their structure, although you wouldn't think it, this makes a huge difference. The content of CLA found in grass fed beef is around 300-500% higher than in grain fed cows. When looking at the synthetic CLA found in supplements it is not derived from animal sources, instead is formed by chemically altering the Linoleic acid found in vegetable oil, a product which is already consumed in a greater quantity than required in the western diet. Many studies have taken place around CLAs ability to aid fat loss as supplement companies boast of the effectiveness. Controlled studies have shown that CLA assists in reducing food intake, increasing fat burning and help stimulate fat burning. However as with many research studies there are also conflicting results.

To draw a conclusion means you have to read between the lines for any research bias. In conclusion it appears natural CLA does have positive effects on the metabolism of stored lipid, however this conclusion cannot be drawn when the CLA is supplemented. Due to the difference between natural and synthetic forms of CLA, the lack of evidence would suggest that supplementing CLA would have no positive effects on fat loss. In fact supplementing CLA would only be increasing your consumption of Omega 6s, a fatty acid in which many people in the western world need to reduce.



BCAAs

BCAA stands for Branch Chain Amino Acids and second to whey protein is one of the most consumed supplements on the market.

When looking to increase muscular size through hypertrophy it is vital that you are consuming enough protein to allow for the required level of protein synthesis to take place and create growth. Amino acids are the building blocks of protein, each protein that you consume is made up of a variety of amino acids, and different sources of protein contain different amino acids. So if amino acids are consumed through protein consumption then why do so many people supplement them? In short they shouldn't!

If you are regularly weight training and consuming around 5 different sources of protein a day, and hitting your daily protein target, then you are simply wasting your money, as you have consumed enough amino acids to allow for the required level of protein synthesis take place.

If you are consuming an excess of protein along with your BCAA supplement then the excess aminos will be stored in fat cells and the broken down ammonia compound (NH₃) will be removed from the body through urine. BCAAs should only be supplemented if you have an extremely high level of protein synthesis (on anabolic steroids) or if you are not able to consume the required amount of protein within your daily diet. So if you feel BCAAs are required then instead of investing in a bottle of Aminos, i would first look at your diet.



Whey Protein

Now here is a big statement, whey protein should actually be considered as a SUPER FOOD! Bet you weren't expecting that? Here is why.....

Just like with fats, no protein is born the same due to their different amino acid structure, however when it comes to getting bang for your buck, Whey protein wins hands down as whey protein has been shown to increase muscle size and strength as well as to reduce body fat due to the variety of amino acids it contains. I know there are other variables effecting this outcome but it's nice to know the supplement you are taking is actively assisting you in achieving your desired outcome. So what is whey protein?

The whey powder many people consume on a daily basis started life as milk, well at least 20% of it as the other 80% is casein protein. When you open a yoghurt pot the watery substance on the surface is whey protein. During the cheese making process, the fatty compounds in milk coagulate leaving behind the water whey substance. Before people discovered the nutritional benefits of this byproduct it was simply thrown away. Now thankfully we are able to easily consume this byproduct in a strawberry flavoured shake.

The commercial form of whey protein we know today is easily consumed, tastes great and is an easy way to increase your protein intake for the day. Protein is the most important macronutrient for both hypertrophy and fat loss due to its role in the body, repairing tissue damage and helping to control blood glucose levels. I would recommend consuming whey protein if you are regularly weight training, completing regular aerobic exercise, if you're looking to reduce your body fat levels or even if you're just looking to increase your protein intake. If you're not already taking whey protein every day, I would strongly recommend you purchase some. Always look on the label though as brands do vary in quality, look out for refined sugar levels as cheaper proteins will often have a higher sugar content.



Creatine Monohydrate

So I save the best till last!

Creatine Monohydrate is the most researched supplement on the planet and studies have proven that it assists in increasing overall muscle size and strength as well as overall athletic performance. Not only does creatine monohydrate improve your performance in the gym but also helps protect you from other health issues such as neurological disease.

So what is creatine?

Creatine is a compound which is naturally made within the body from 2 amino acids glycine and arginine and can also be consumed through eating meat. 95% of our creatine is stored within muscular cells as phosphocreatine ready to be used through explosive and anaerobic exercise such as sprinting or low rep weight training, the other 5% is stored within our brain, kidneys and liver.

Everyone's creatine stores will be different due to variables such as diet, muscle mass and levels of hormones such as testosterone however supplementing creatine monohydrate will increase your phosphocreatine stores as a high energy molecular known as ATP ready to be used in the gym. Due to the increase in your muscles energy stores training intensity can be increased by both load and volume resulting in a greater increase in muscular size to accommodate this increase in resistance.

Creatine also increases cellular hydration and helps to prevent muscle breakdown, although you will be hitting your dietary targets so this shouldn't be a problem anyway, but nice to know creatine has your back. When supplementing creatine please make sure you increase your hydration levels due to the supplement's role in cellular hydration.

If you are training and you're not supplementing creatine monohydrate, get on it!



How Much Water Should You Consume

Hydration is a variable effecting your overall health and performance which is often forgotten about during a busy day. How often do you get half way through the day and suddenly remember that you haven't drunk anything since you woke up? Your body is 70% water and is the single most important chemical that is require to live. Out of that 70% about 46% is contained within cellular membranes as all chemical reactions within the body take place within water solution. The other 24% is held outside of cell membranes inside blood plasma and other body fluids such as urine.

How much water you should drink everyday has been debated by industry professionals for years, with some saying 2 litres is fine and others saying you simply need to drink something every hour. How much water you require is determined by different variables such as activity level, environment temperature, metabolic rate and body composition so working out what works for you is probably best.

Through all this debate however what can be concluded is the effects on both neurological and physical performance from slight dehydration, between 1-3% of total body weight. I know one key signal for me that I'm dehydrated is I get what I call 'dehydration brain', my ability to focus and problem solve are greatly reduced as my brain seems cloudy and I am unable to find any clarity with the task I am attempting to complete. We all know not to drink alcohol and drive due to the effect it has on your response time, but being dehydrated can have a similar effect. In 2015 Loughborough University carried out a study into the effects of driving when you're dehydrated. The results were clear with all drivers making more unforced errors such as lane drifting and late breaking while driving due to their inability to focus and respond to hazards. So as you can see ensuring you are well hydrated can improve your performance in the gym as well as at work and in all other areas of your life. To ensure that you perform at your very best during your workouts it is vital to walk into the gym already well hydrated, so this will mean drinking regularly throughout the day before your workout. During and after you train are also times when it is vital to consume regular amounts of water as sweat is one of the main methods of dehydration especially in gyms which are not air-conditioned. So you may find that before, during and after your workout you may consume over 2 litres of water which would mean for the whole day you would require more than just the 2 litres that some recommend.

There are beliefs that drinking water helps with fat loss, as much as this is true it is not saying that the more you drink the more fat you will lose. It's not so much the process of drinking water that helps with fat loss, but more the fact dehydration will severely hinder it. When in a calorie deficit the body will source the required ATP (energy) from either the glycogenic or the ketogenic pathway, depending if the body has enough glycogen stores within the muscles and liver. In order for this chemical reaction to take place the cell needs to be well hydrated, if the cell is dehydrated this transfer of either the glycogen or stored lipid (fat) will be hindered.

So in a nut shell aim for 2 litres of water a day if you are having a fairly sedentary day and increase your water intake according to your daily activity. If you going to the gym make sure you are well hydrated throughout the day and so your daily intake may increase to between 3 and 4 litres. If you sense any signals that you are dehydrated then do what you can to reverse this ASAP, you don't want dehydration ruining all your hard work and impacting your training results.



Building Body Confidence
By James Robertson

Weight Training

When it comes to weight training you can carry out each repetition with perfection, or you can be screaming like you're in labour whilst throwing weights around like you're having a fit. If you go to the gym you will know what I mean, right now as I am writing this I am in the gym looking at someone doing exactly that, what a plum! For these individuals they are guided by a very negative emotion, ego!

They are more concerned about looking strong in front of others in the gym as oppose to actually becoming strong. These individuals are not practising the most basic rules when it comes to successful weight training.

These rules are:

1. A muscle responds when a greater force is placed upon it through movement. The process of completing a load based movement will create micro tears within the muscle fibres. Through protein synthesis these tears are repaired and the fibre size is increased to allow the muscle to cope when a similar force is placed upon it. This is how you achieve hypertrophy or increase muscular tone. The more load placed upon a muscle the larger it will become through this process. If you want big muscles you need low reps, high weights and increased volume. You want to increase muscle tone then higher reps with less weight and progressive volume is what is needed. If your female please don't worry lifting weights will not turn you into the hulk, you are missing one MAJOR component which controls muscular size, testosterone!
2. As a muscle responds to force, the more force placed upon it the greater the muscular response. Now how you structure your training program will very much depend on your training objective, this is where your training and your diet work in harmony.



Hypertrophy

If your objective is to increase your overall body mass through increasing the size of your muscular system then consistently challenging the capability of each muscle is key. In order to create growth first you have to ensure that you are in a calorie surplus, consuming more calories everyday then you burn.

Along with calorie management you also need to make sure you are on top of your protein intake consuming around 2.5 – 3grams of protein per kilo of bodyweight, I know that's a lot! Then there's the progressive load, in order to keep your muscles growing you need to keep challenging their capabilities and you do this through weight training.

As you progress through your workout (the Lean Gain Program, FCK Bro Science program and the Pure Strength program would be perfect) you will need to record the amount of weight you lifted for each set you completed. You will challenge the performance of each muscle every week through slight increase in either weight or volume.

Remain consistent with this process and you will achieve your hypertrophy goals, but be prepared to play the long game as hypertrophy doesn't come easily, it takes time.



Fat Loss

If you follow me on Instagram @jamesrobertsonPT then you will be aware of the most important factors that contribute to successful fat loss. Gym based training is number 4 on the most important list, however is vital for producing a body you can be proud of. From a training perspective it is important that you achieve 2 outcomes from your training:

1. Increase the thermogenic process within your body through creating a demand for energy production. You can achieve this through all types of movement (NEAT calories) but ensuring you burn as many (EAT calories) as you can during your workout will also help to increase your thermogenic process meaning you are burning more calories as a result of your workout. **Neat Calories** = Non Exercise Activity Thermogenesis calories burnt through everyday movement. **Eat Calories** = Calories burnt during planned and executed workouts.

2. You improve your overall muscle tone and density, for a second I want you to close your eyes and imagine you are an artist working on a masterpiece however both you and the canvas are covered by a sheet so no one can see what you are painting. Once you have finished painting you pull off the sheet to reveal the masterpiece you have created or lack of if you have not been working hard. The fat loss process is exactly the same, however your masterpiece is your body and the sheet is your body fat. By achieving fat loss without exercise means you are pulling of the sheet to reveal nothing as you haven't been working on improving your physique through the toning and developing of different muscles. You will be pulling of the cover to reveal a body in a state of atrophy due to the calorie deficit and lack of protein synthesis. Placing the body into this state is known as Adaptive Thermogenesis, the body has reduced its energy production due to the low calorie consumption and the low energy requirement. If the end goal is to only achieve fat loss then you may end up with less body confidence than you started with.

Hopefully you have realised that there is a right way and a wrong way to reduce your body fat and one of the biggest mistakes you could make, is to make the end goal purely focused on your body fat %. I understand that this is the main objective, but by combining this with performance based goals, not only will you achieve your fat loss results far quicker but you will also increase your strength, muscle tone and overall create a body you can be proud of.



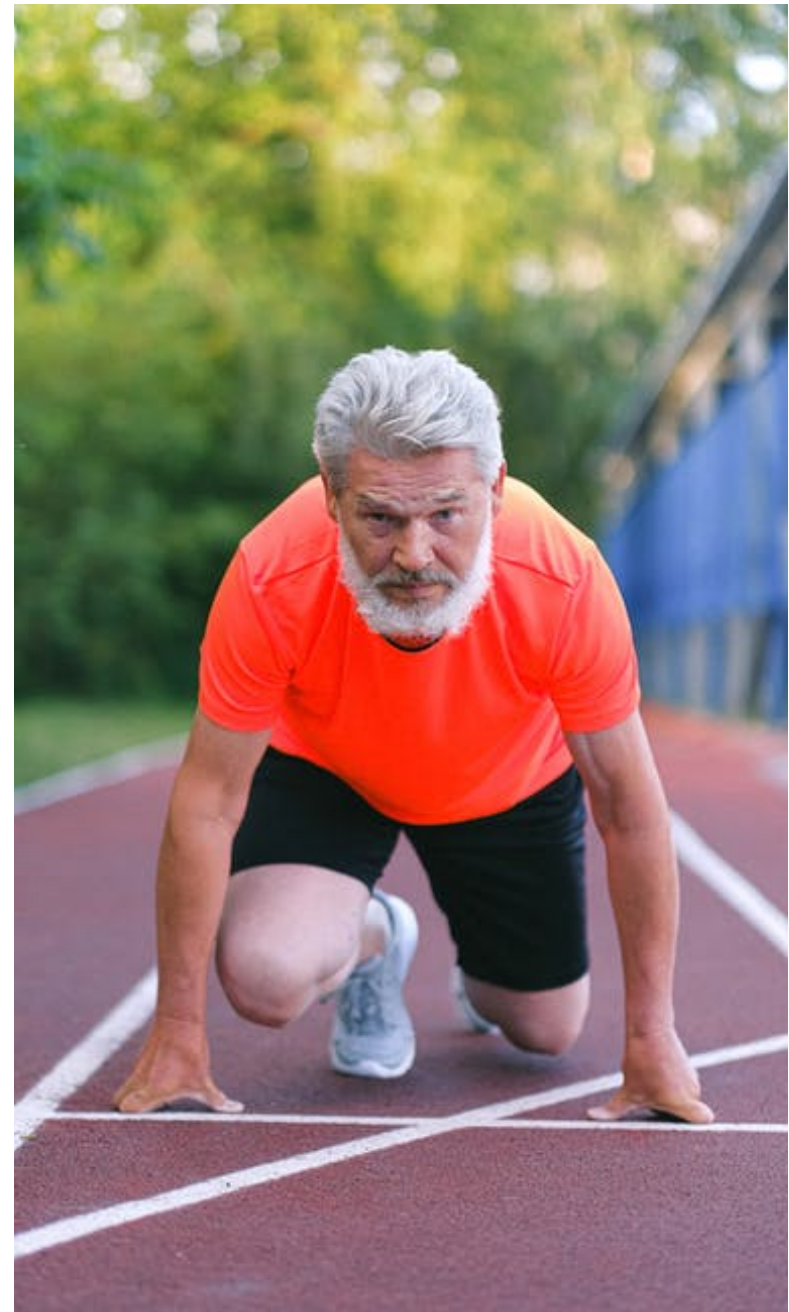
Is Cardio King?

In short, yes, well it helps! After reading the last section of this book you know the importance of increasing energy production in the body and preventing any form of thermogenic adaptation through a large negative energy balance. So assuming that your diet is on point and you are achieving your daily calorie and protein targets then cardiovascular training is only going to assist you to increase your body's thermogenic process by creating an increased demand for energy. This is through increasing both NEAT and EAT components affecting your TDEE (Total Daily Energy Expenditure).

When you investigate cardiovascular training especially for fat loss you get a lot of 'bro science' on the internet and within gyms themselves. People argue about the benefits of carrying out fasted cardio (training first thing before any food consumption) against non-fasted cardio (cardio completed after a feed) and whether cardio should be HIIT (High intensity interval training) or LIIT (Low intensity interval training). Let's keep this process as simple as possible and remember the whole reason we are carrying out cardio based training is to increase the thermogenic process through creating a demand for energy production. Studies into the effects of HIIT and LIIT when it comes to fat loss are conclusive in that there is little difference in the amount of fat metabolised when either are carried out as part of a regular training program.

So with this in mind it doesn't matter how you carry out your cardio training, my advice is do something you enjoy. Carrying out any form of exercise that you don't enjoy will not be adhered to long term and so is not a credible solution. If you enjoy what you are doing then it becomes habit, when something becomes habit you are able to enjoy the results long term. Remember however, due to the stress cardiovascular training places upon the body it requires a lot of calories to complete, thus having such a profound effect on energy production. If you were to make cardiovascular training your primary training style you will run the risk of creating a negative energy balance so large you will enter the realms of thermogenic adaptation due to your increased calorie deficit. The body is not able to create the required energy for the production of ATP and to ensure the required level of protein synthesis, you will be in a state of atrophy and this is not a state to be in for sustainable long term fat loss.

Cardiovascular training has its place on a training program to increase the number of EAT calories but not to the point your calorie deficit becomes too large. Always make sure weight training is your primary focus in the gym and squeeze in some cardio at the end of your workout or during a rest day.



Your Next Move...

Well done for reading this far, hopefully all this information has been of a benefit to you and has answered some questions that you had. Now we move onto the process! Right now, is the time you start to change your life.

Before we begin to piece together your targets, I want you to take on board my mantra and remember this everyday:

'You are a walking representation of your daily habits!'

What I mean by this, is everything you achieve in life has been as a result of the small steps you take every day to achieve that outcome. Without small steps there's no movement, without movement there's no destination, without a destination you will stay exactly where you are!

So take a moment to think about exactly what it is you want to achieve from this journey and make yourself a promise, 'I will do what is required every day to achieve that outcome'.

If you are not ready to make that promise then you are not yet ready to take on this challenge, and that's fine, this book is yours now and will be ready when you are.

However if you are ready to commit and have made that promise to yourself, then lets begin....



Goal Setting

Before you start any body composition change it is important you not only set yourself clear objectives but also understand why those objectives are important to you. There probably isn't a person walking this earth who if they were being honest wouldn't want to change something about themselves. So why is it then, so few manage to go through a body composition change and come out the other side happier and healthier than they were before? This is simple really; they were not in the right mindset before they began the challenge, they focused too much on short term results and became disheartened when they did not receive that instant gratification they were after.

They did not set themselves clear objectives to achieve both long term and short term, and understand the impact achieving a successful outcome will have upon their life. Before we start to set some goals, I want you to understand 1 thing, you are in this for the long run!! This is not a quick fix diet promising 6 pack abs in just 12 weeks, this is a journey of education and change, the daily habits you are about to adopt will become part of your life.

Understanding this will take the short term pressure off you, the worst mindset you can be in is the quick fix mindset, weighing yourself everyday to gain instant gratification from any slight movement on the scales. Nothing worth having comes easy, remember you are a walking representation of your daily habits, so in order to be successful long term means those daily habits have to become long term habits focus on the consistency of positive actions and not so much on the scales. I promise you, you will go through this process and come out a happier, healthier and fitter version of yourself, just please don't give up, you got this So lets set some goals.....

List the top 3 outcomes you would like to achieve from this lifestyle change?

1. _____
2. _____
3. _____

How will achieving these objectives change your life?

1. _____
2. _____
3. _____



Weekly Targets

Weekly targets may include:

- Ensuring you complete all your workouts for that week.
- Ensuring you finish the week hitting your weekly calorie and protein targets.
- Ensuring you finish the week hitting your weekly step count.
- You achieve your weight target either up or down depending on your objective.

1. _____

2. _____

3. _____



3 Month Targets

3 Month targets may include:

- You are seeing physical changes to your body composition and are happy with the results.
- You have adopted your daily habits as daily rituals and enjoy the completion of these tasks everyday.
- You have just completed your second progressive training program and have greatly increased your overall strength.
- You are enjoying an increase in your overall body confidence and self-esteem.
- You have completed your first 'Progression Tracker' and have completed all your daily tasks, recording your progress everyday.

1. _____

2. _____

3. _____





You have armed yourself with as much knowledge as possible and you have set yourself targets to achieve over the next 3 months, now your almost ready to go. If you haven't already done so you now need to do the following, head back over to www.JamesRobertson.fitness and purchase the following:

1. Choose your first 12-week training program based on your experience level in the gym and training objective.
2. Choose your macro-based recipe book to ensure your diet is varied, tasty and manageable.

Once you have both, then you are now 100% good to go, remember to take each lbs of fat loss at a time. Nail the first lbs and then move onto the next, focus on the long game and nail your daily habits everyday. I want you to fall in love with the journey and not just the end result, this is where life long and sustainable change is achieved.

Now that's enough reading, its time for action, get your butt over to the gym and lets begin!