

A photograph of two women in a gym setting, performing a cobra yoga pose on black mats. They are both looking upwards. The woman on the left is wearing a pink shirt, and the woman on the right is wearing a purple tank top. The background features large windows looking out onto a residential area with trees and houses. The floor is made of polished wooden planks.

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LEANER,
HEALTHIER
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LEGAL DISCLAIMER

The information presented in this package is by no way intended as medical advice or as a substitute for medical counseling. The information should be used in conjunction with the guidance and care of your Doctor. Consult your Doctor before beginning this program as you would with any exercise and nutrition program. If you choose not to obtain the consent of your Doctor and/or work with your Doctor throughout the duration of your time using the recommendations in the program, you are agreeing to accept full responsibility for your actions.

By continuing with the program you recognize that despite all precautions on the part of HFL Fitness Pty Ltd *trading as function well personalised health & fitness centre*, there are risks of injury or illness which can occur because of your use of the information in this ebook. You expressly assume such risks and waive, relinquish and release any claim which you may have against HFL Fitness Pty Ltd *trading as function well personalised health & fitness centre* or its affiliates as a result of any future physical injury or illness incurred in connection with, or as a result of, the use or misuse of the program.

You must have a complete physical examination if you are sedentary, if you have high cholesterol, high blood pressure, diabetes, if you are overweight, or if you are over 30 years old. Please discuss all nutritional changes with your Doctor or a registered dietician. If your Doctor recommends that you don't use this program, please follow your doctor's orders.

If you are unfamiliar with any of the exercises referenced, consult an experienced personal trainer or strength coach on correct form and execution.

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Goal Setting

GET FOCUSED-BELIEVE YOU CAN-NO EXCUSES MENTALITY-ACHIEVE ANYTHING!!

Get Focused

Set Goals

What WILL I achieve over the next 8 weeks?

.....

.....

.....

Why Is It Important To Me & Why MUST I Achieve This Goal?

.....

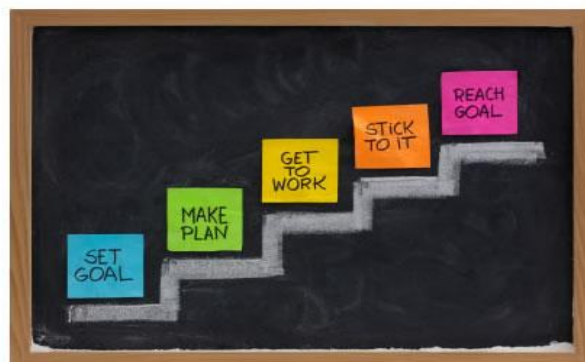
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Breaking Behavioural Patterns

This exercise is designed to identify patterns in your life that are addictive, destructive and habitual.

| Destructive Habit | Plan of Action to Change |
|---|---|
| <i>E.g.: Drink in excess of 15 alcoholic drinks per week.</i> | <i>Set myself a weekly limit of 5 drinks. Have no alcohol in the house, instead of catching up with friends for drinks on Thursday & Friday I'm going to catch up with them for a work out.</i> |
| <i>Eat a bowl of ice cream every night</i> | <i>No more buying ice cream, find a low carb paleo friendly substitute.</i> |
| | |
| | |
| | |
| | |



“What You Wish to Improve Must Be Measured”

Health Assessment

| | | | | |
|---|--|--|--|--|
| Date: | | | | |
| General Health | | | | |
| Age | | | | |
| Weight | | | | |
| Goal weight | | | | |
| Girth Measurements | | | | |
| Arm (flexed) | | | | |
| Arm (relaxed) | | | | |
| Chest | | | | |
| Waist (mid ax) | | | | |
| Hip | | | | |
| Buttocks | | | | |
| Mid Thigh | | | | |
| Fitness Test | | | | |
| 2km Treadmill to Time | | | | |
| 2 Minute Prowler Challenge | | | | |
| Strength Test - | | | | |
| Max Push-Ups | | | | |
| Max Chin Ups | | | | |
| Squat (Ask a coach what form of squat & intensity you should do) | | | | |
| Plank | | | | |
| Side Bridge E.S | | | | |

OPTIMAL TRAINING RECOMMENDATIONS



You Want The Truth On Fat Loss? Well Here It Is

You may not like what you're about to read but it's the truth on fat loss whether you like it or not. This article may hurt your feelings, but my passion is to get people healthy and lean and I'm not going to tell you what you want to hear- I'm going to tell you what you need to hear. Take on board that this is my passion and my brutal honesty in this article is with your best interests at heart. I want you to get your fat down, put some muscle on and most importantly improve your health, so I have to ignore your feelings for the purposes of this article to give you the wakeup call you may need.

Take on board what I'm telling you in this article and you won't have to worry about "does my ass look big in these jeans", "is this shirt too tight on my stomach", "I can't go out nothing fits me", or "does this make me look fat"?

Without doubt the question I get asked most frequently is "How do I get rid of this" as people grab at their love handles.

If you want to get rid of your love handles once and for all, then here lies all the information you need. You won't get this from some fluffy fitness magazine- they won't give you the hard facts because they want you to keep coming back to buy their magazine, the cheesy fitness equipment, miracle fat loss pills and quick fixes they advertise- because that's what keeps their magazine going.

Remember I warned you, you may not like what you're about to read, but it's the truth! I know the truth hurts, which in some cases has cost me clients and members because people are too damn lazy (excluding function well members of course!). Most people want the bloody easy option; they're looking for the quick fix. But guess what? There is NO QUICK FIX! Sitting on a frigging exercise bike for an hour watching Dr Phil does not constitute justification for the piece of cake you ate. It's not going to get your body to the land of ripville; you're going to stay FAT!

If I read another article that says the only way to get long term fat loss is through moderation and a slow and steady approach I'm going to put my head through the wall.

I've been in the industry for over a decade and have rarely seen someone make a dramatic visual change by taking a slow, steady approach and *everything in moderation*. Give me a break! What is moderation in today's diet?

You are not going to achieve fat loss with half-ass efforts and "kinda sorta" wanting it. For at least 4-8 weeks you must be **intense** and **dedicated** with your training and diet and then you can look to a little *moderation*. You can do this when you fully understand the term *moderation* and your body composition is at respectable level – once you get your metabolism cranking you can afford to have foods that are not so good, 80% good, 20% not so good.

By no means do I expect you to eat perfectly for 52 weeks of the year. I do understand you have a life and that means enjoying a glass of wine and a dinner out here and there, what I'm saying is simply get your body into a fat burning state by getting the hormones responsible for fat loss happening and then implement a *balance/moderation* or whatever you want to call it.

Bad habits *must* be broken.

Sticking points in muscle and strength gains and fat loss *must* be smashed; this is not going to be achieved with a *slow* and *steady* approach.

Fat loss is an all-out war.

Give it 28 days — only 28 days. Attack it with all you have. It's not a lifestyle choice; it's a battle. Lose fat and then get back into moderation.

There's another one for you: moderation. Revelation says it best: 'You are lukewarm and I shall spit you out.' Moderation is for sissies." -Dan John (*World Renowned Strength Coach*).

Those of you who know me will understand if there is one thing in life I hate it is excuses. I don't generally tolerate excuses very well especially the number one excuse "I don't have time". What a load of BS! You're justifying your lack of commitment, drive and laziness with a lame excuse.

I understand you are very busy and extremely limited for time, so what better reason to be healthy and fit? You can't afford to get sick! By eating well and exercising you're going to have better energy levels, which means you'll be more productive and dramatically decrease your risk of illness and disease. So you're actually creating time for yourself. If you can find time to sit in front of the television 3-4 times per week or Facebook you've got time to train – it's not a matter of time it's a matter of priorities!

Most of us can only make time to train three to four times per week. With that in mind — with time being our limiting factor — this article is going to explain how to maximise fat loss with limited time. What is going to give you the biggest 'bang for your buck'?

Fat Loss Order of Priorities

Achieving a physique transformation is far more complex than the simple calories in vs. calories out model. The real keys are to use your diet and exercise protocols to elevate your resting metabolic rate AND manipulate your anabolic, lipolytic (fat burning) hormones. Strength training has a far more powerful effect on these processes than aerobic training. The majority of your training should be anaerobic – Resistance training/interval cardio rather than traditional aerobic cardio.

1. Without doubt the first area that needs to be addressed is nutrition.

Plain and simple no matter what your goal is you can't out train a bad diet. This is especially true if fat loss is your goal.

(Remember the 6 Nutrition Rules to Make Your Body 'function well')

2. Exercise To Get Your Metabolism Cranking.

Your exercise selection should be based on burning calories, promoting hypertrophy (muscle gain) and Resting Metabolic Rate (RMR) activation.

So the foundation of our fat loss plan is resistance (weights) training to gain some lean muscle mass. Ladies: I can already hear you saying "I don't want muscles, I just want to get *toned*". By the way, I hate the word toned! What you're really looking to achieve is a drop in body fat and an increase in muscle- that's what being 'toned' is.

What is not made clear with many articles related to fat loss is that the bulk of our calories burned are determined by our RMR. Calories utilised outside our RMR through exercise etc. is a smaller contributor to overall calories burned per day.

So how do we increase our RMR? It's simple.

The more muscle you have, and the harder you work that muscle mass, the greater the elevation in metabolic rate. Lifting weights is the only way you are going to get a significant change in body shape. Every weight you lift brings you one rep closer to your Ultimate Physique.

3. Metabolic Conditioning and High Intensity Interval Training (HIIT)

Anyone who knows anything about physique transformation will tell you "traditional cardio" (aerobic) training is lowest on the list of priorities for fat loss.

Remember we are talking about how to achieve *fat loss*, I'm not taking into consideration training for performance enhancement for an athlete, to prove you can run a marathon, or because you like a particular endurance activity. My focus is on fat loss, pure and simple.

If you're jogging aerobically in an endeavour to get rid of your love handles and improve your physique, you're taking the hard road. There are much more effective ways to produce fat loss in far less time.

When most people think of training to improve endurance, they think of conditioning the cardiovascular system to improve the efficiency of transport of oxygenated blood to the working muscles. Metabolic conditioning is the other side of the coin – conditioning the muscles to better use what’s being delivered to them by improving the efficiency of the different metabolic pathways.

When movement patterns are performed with a high level of intensity and short rest intervals between exercises, the cardiovascular and metabolic conditioning benefits greatly exceed what can be achieved with more traditional “cardio” activities.

Metabolic training utilises conditioning exercises intended to increase the storage and delivery of energy for any activity. Generally, high intensity efforts of two minutes or less are anaerobic, while efforts greater than three minutes are aerobic.

Anaerobic training must be done at high intensity and so can only be sustained for short periods of time. Generally efforts last for 2 minutes maximum at a time, resting between efforts in order to continue repeating the process at high intensity. Because the intensity is so high the working duration of the session shouldn’t be any longer than generally 30minutes. It is much easier to accumulate volume in traditional “aerobic” training simply because it requires less energy, when doing metabolic training the volume (duration) is less because it requires much more energy and is more physically demanding.

The second component of metabolic conditioning is High Intensity Interval Training (HIIT). HIIT burns more calories overall than steady state cardio and elevates metabolism significantly more than other forms of cardio.

The positive is that you can train for less duration and get a better result, the downside is it’s bloody HARD – but when you finish a tough session that feeling you get is ‘what it really feels like to be alive’!

Land mark study on interval training from Tremblay:

Tremblay A, Simoneau JA, Bouchard C.

Impact of exercise intensity on body fatness and skeletal muscle metabolism.

Metabolism. 1994 Jul;43(7):814-8

This study pitted 20 weeks of endurance training against 15 weeks of interval training:

Energy cost of endurance training = 28661 calories.

Energy cost of interval training = 13614 calories (less than half)

The interval training group showed a nine times greater loss in subcutaneous fat than the endurance group.

When looking at this it doesn’t seem to make sense that the endurance group burnt more calories but loss less fat? That is of course unless you understand Excess Post-Exercise Oxygen Consumption, which explains the significant fat loss increase.

So what exactly is EPOC?

EPOC is the recovery of metabolic rate back to pre-exercise levels, the most effective way to increase EPOC is with weight training – This is because all of what’s involved in the recovery process from strength training – cell activation/repair, tissue repair, protein synthesis, etc. all require energy (calories). Next comes metabolic conditioning, then HIIT and aerobic activity last.

Priorities Training List Summary & Studies

Train every muscle group hard and frequently- especially the big muscle groups- to create an increase in metabolic pathway utilization. This will leave our metabolism elevated post workout for longer than traditional endurance activity.

Below are some great studies that I got from an article written by Alwyn Cosgrove called ‘The Hierarchy OF Fat Loss’.

A study by Kramer, Volek et al on the ‘Influence of exercise training on physiological and performance changes with weight loss in men’.

Med. Sci. Sports Exerc., Vol. 31, No. 9, pp. 1320-1329, 1999.

Overweight subjects were assigned to three groups: diet-only, diet plus aerobics, diet plus aerobics plus weights. The diet group lost 14.6 pounds of fat in 12 weeks. The aerobic group lost only one more pound (15.6 pounds) than the diet group (training was three times a week starting at 30 minutes and progressing to 50 minutes over the 12 weeks). The weight training group lost 21.1 pounds of fat (44% and 35% more than diet and aerobic only groups respectively).

The addition of aerobic training didn’t result in any significant fat loss over dieting alone. Putting yourself through an extra 36 sessions of up to 50minutes at a time for 1 pound of fat loss doesn’t seem worth it especially when we are all so time poor – there are more effective ways to drop body fat. This study shows traditional cardio is of little importance when trying to enhance your physique.

Schuenke MD, Mikat RP, McBride JM.

Effect of an acute period of resistance exercise on excess post-exercise oxygen consumption: implications for body mass management.

Eur J Appl Physiol. 2002 Mar;86(5):411-7. Epub 2002 Jan 29.

This study used a circuit training protocol of 12 sets in 31 minutes. EPOC was elevated significantly for 38 hours post-workout.

Thirty-eight hours is a pretty significant time frame for metabolism to be elevated, other studies have shown after a high intensity weights session metabolism can be elevated for up to 48 hours post-workout.

Bryner RW, Ullrich IH, Sauers J, Donley D, Hornsby G, Kolar M, Yeater R.

Effects of resistance vs. aerobic training combined with an 800 calorie liquid diet on lean body mass and resting metabolic rate.

J Am Coll Nutr. 1999 Apr;18(2):115-21.

The aerobic group performed four hours of aerobics per week. The resistance training group performed 2-4 sets of 8-15 reps, 10 exercises, three times per week.

The resistance training group lost significantly more fat and didn't lose any LBM, even at only 800 calories per day. (The reason the calories were so low was to really take any dietary variables completely out of the equation and compare the effects of the exercise regime on LBM and metabolism.) The resistance training group actually increased metabolism compared to the aerobic group, which decreased metabolism. It seems that resistance training is a more significant stress to the body than a starvation diet.

Putting It All Together

The purpose of this article is to clarify what is going to give you the 'biggest bang for your buck'. We are going to transform your physique in the most time efficient manner. Addressing diet is without doubt the most important factor for fat loss.

Training

If you've got time for only 3-5 sessions a week you would follow the guide lines above – your weekly routine should look something like this: 2-3 weights sessions and 2-3 metabolic sessions, or 3 weights, 1 metabolic and 1 HIIT session. This is where investing in a coach becomes important as they will design a weekly routine specific to your goals and current level.

If you've got time for 5 + sessions a week then I would recommend something along the lines of 3-4 weights sessions, 1-2 metabolic sessions or 1 metabolic and 2 HIIT sessions. Again these are broad guidelines and your training schedule is really dependant on your specific goals. Investing in an experienced coach/personal trainer is something I strongly recommend if you're serious about fat loss. If you're paying a personal trainer who is fat and unhealthy themselves, it's a fair bet they don't have the discipline or know how to achieve a respectable body composition- stop wasting your money and find one that walks the walk.

If fat loss is not happening at a rate that you're happy with, then walking- not as an exercise session but simply to burn some extra calories without catabolising muscle will of course contribute to fat loss and not have a negative effect on your hormone levels and recovery processes from your intense metabolic and resistance training sessions. This is the type of exercise we were meant to do: not ½ marathons and marathons.

You'll have a hard time convincing me that moving more won't contribute to fat loss, any chance you get to move is a chance to burn more calories. Always be conscious to include incidental activity in your daily routine.

You don't have to flog yourself every session; the beauty is the harder you train doing the right training means the less you have to train. If you've got more time to exercise for sure do some low intensity aerobic sessions but make sure you've done your weights and metabolic sessions first.

Be aware that aerobic/endurance sessions (I don't mean walking here or going for a moderate bike ride) elevate cortisol levels. So does resistance training but the difference is when we lift weights we get a growth hormone and testosterone response which offsets the effects of cortisol and leads to lean muscle gain.

Long frequent endurance sessions leads to excessively high cortisol levels. High cortisol levels can force the body to break down its own muscle tissue, convert it to glucose (gluconeogenesis), and use it for fuel. If you've got increased fat accumulation around the midsection fair chance your cortisol levels are too high. This can be addressed through diet, certain supplements and correct training protocols to decrease your body fat.



Foundation Program

Our philosophy is you should be able to handle your own bodyweight with good form and technique before progressing onto a program that is solely based upon applying additional load.

We believe you should be able to complete the bodyweight exercises included in the below program with strict form and perfect technique before including weighted equivalents. For example there is no point trying to do squats with a barbell if you are unable to maintain good hip stability and full range of movement ROM with a bodyweight split squat or bodyweight squats. It is not uncommon for the hips to be unstable and thus drop to one side when performing squats.

If this is the case, the most important thing you can do is strengthen the main stabilising muscles of the hips (abdominals and glutes). By having strong glutes you will have a strong pelvis, taking the load off your lower back. Your lower abdominal muscles stabilise the pelvis preventing your hips from being in a position of forward tilt.

We have found that building good foundation strength which enables you to handle your own bodyweight effectively in conjunction with the practice of specific mobility and flexibility drills creates what we refer to as *structural balance*.

This format provides you with superior results long term and dramatically reduces the chance of injury.

We often find that those who are new to exercise or those who have had a significant amount of time off from their training routine do not have good strength endurance. When fatigue sets in, faulty recruitment patterns occur and this can also lead to injury and lack of results.

This program involves single arm/leg (unilateral) and bilateral exercises focusing on learning strict form and technique, along with isometric exercises (holding one position) to build sufficient muscle endurance.

Warm Up

As per 3 phase warm up poster located on the gym floor and stretching/trigger pointing area – MAKE SURE THE CRAB WALKING IS ONE OF THE EXERCISES YOU INCLUDE.

Then complete 2 sets of 30 secs of each of the following stretches:

Quad, Hip Flexor & Glute Stretch



If you are in a seated position for long periods it is more than likely you'll have tight quads and hip flexors. This will place your pelvis in a forward tilting position which also creates underactive glutes.

DON'T SKIP THE STRETCHING!

Weekly Schedule

- Aim to get 2-3 weights sessions in each week with 2-3 interval or group sessions.
- Alternate between Session 1 & Session 2
- Aim for 4-5 sessions per week.
- On REST days you can do light cardio and stretch.

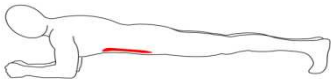
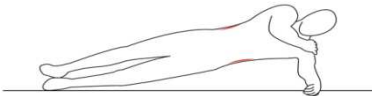

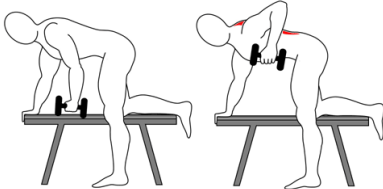
Lifting Rules

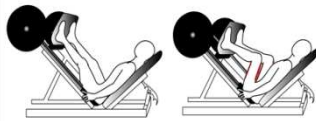
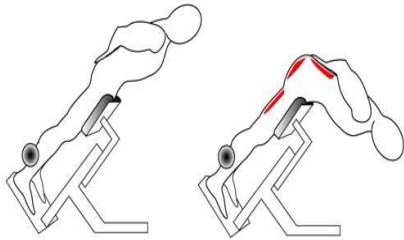
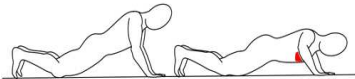
- Always look at the horizon
- Maintain posture
- Brace abdominals

Program 1

| | |
|-----------------------|---|
| Muscles Worked | Full Body |
| Description | Complete each exercise in a circuit type fashion. Perform A1 through to A4 with 30 sec rest between each exercise. Once exercises from A1-A4 have been completed rest for 1min then repeat two more times. Do the same thing for B1-B3. |

Foundation Phase


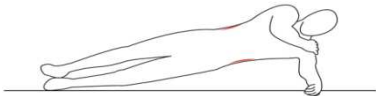

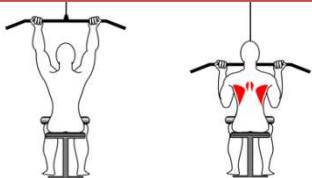
| | Week 1 | | | Week 2 | | | Week 3 | | | Week 4 | | |
|---|---|-----|----------|--------|-----|------|--------|-----|------|--------|-----|------|
| | Sets | Wgt | Reps | Sets | Wgt | Reps | Sets | Wgt | Reps | Sets | Wgt | Reps |
|  | 3 | | 12-15 | | | | | | | | | |
| A1 Bridge | Maintain neutral spine at all times, as soon as you lose your posture stop the exercise. Goal is to be able to hold for 2mins. This will take time | | | | | | | | | | | |
|  | 4 | | 12-15 | | | | | | | | | |
| A2 Side Bridge | Maintain neutral spine, ears in line with shoulders, shoulders in line with hips. As soon as you lose your posture stop the exercise goal is to get 60sec-90sec | | | | | | | | | | | |
|  | 3 | | 10-12e.s | | | | | | | | | |
| A3 Split Squat | | | | | | | | | | | | |
|  | 3 | | 10 - 12 | | | | | | | | | |
| A4 One Arm Row Muscle Group: Back | | | | | | | | | | | | |


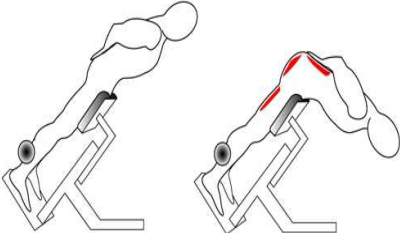

| Foundation Phase | | | | | | | | | | | | |
|--|---|-----|----------|--------|-----|------|--------|-----|------|--------|-----|------|
| | Week 1 | | | Week 2 | | | Week 3 | | | Week 4 | | |
| | Sets | Wgt | Reps | Sets | Wgt | Reps | Sets | Wgt | Reps | Sets | Wgt | Reps |
|  | 3 | | 12-15 | | | | | | | | | |
| B1 Leg Press | Please note: The leg press we have is pin loaded, not plate loaded as pictured | | | | | | | | | | | |
|  | 3 | | 12-15 | | | | | | | | | |
| B2 45Degree Back extension hold | Maintain neutral spine, ears in line with shoulders, shoulders in line with hips, with knees locked out whilst squeezing your glutes. When you can hold this position for 90 seconds then move onto repetitions as pictured | | | | | | | | | | | |
|  | 3 | | 10-12e.s | | | | | | | | | |
| B3: Push ups | The only movement should be in the upper limbs. Keep a neutral spine and good scapula control, no sagging through the lower back. | | | | | | | | | | | |

Program 2

| | |
|-----------------------|---|
| Muscles Worked | Full Body |
| Description | Complete each exercise in a circuit type fashion. Perform A1 through to A4 with 30 sec rest between each exercise. Once exercises from A1-A4 have been completed rest for 1min then repeat two more times. Do the same thing for B1-B3. |

Foundation Phase

| | Week 1 | | | Week 2 | | | Week 3 | | | Week 4 | | |
|---|---|-----|----------|--------|-----|------|--------|-----|------|--------|-----|------|
| | Sets | Wgt | Reps | Sets | Wgt | Reps | Sets | Wgt | Reps | Sets | Wgt | Reps |
|  | 3 | | 12-15 | | | | | | | | | |
| A1 Glute Bridge | Start with both legs. Then progress onto single leg - Goal is to complete 20 e.s before feeling cramping or fatigue in the hamstring. | | | | | | | | | | | |
|  | 4 | | 12-15 | | | | | | | | | |
| A2 Side Bridge | Maintain neutral spine, ears in line with shoulders, shoulders in line with hips. As soon as you lose your posture stop the exercise goal is to get 60sec-90sec E.S | | | | | | | | | | | |
|  | 3 | | 10-12e.s | | | | | | | | | |
| A3 Box Step Ups | | | | | | | | | | | | |
|  | 3 | | 10 - 12 | | | | | | | | | |
| A4 Lat Pull Down Reverse | | | | | | | | | | | | |

| Foundation Phase | | | | | | | | | | | | |
|--|---|-----|----------|--------|-----|------|--------|-----|------|--------|-----|------|
| | Week 1 | | | Week 2 | | | Week 3 | | | Week 4 | | |
| | Sets | Wgt | Reps | Sets | Wgt | Reps | Sets | Wgt | Reps | Sets | Wgt | Reps |
|  | 3 | | 12-15 | | | | | | | | | |
| B1 Seated Row | Leg press we have is pin loaded not plate loaded as pictured | | | | | | | | | | | |
|  | 3 | | 12-15 | | | | | | | | | |
| B2 45Degree Back extension hold | Maintain neutral spine, ears in line with shoulders, shoulders in line with hips, with knees locked out whilst squeezing your glutes. When you can hold this position for 90 seconds then move onto repetitions as pictured | | | | | | | | | | | |
|  | 3 | | 10-12e.s | | | | | | | | | |
| B3: Push ups | The only movement should be in the upper limbs. Keep a neutral spine and good scapula control, no sagging through the lower back. | | | | | | | | | | | |

Misconception 1 – Counting Calories

Calories in Vs Calories out Model?

How often do you hear “if you want to lose weight it’s very simple, eat less move more”. Unfortunately the world we live in today is not that simple. In a lot of cases, addressing our hormones through nutrition and lifestyle practices is often overlooked and the calories in vs. calories out model given preference- or worse: some shake diet or instant fat loss method.

We now live in an era of unavoidable daily toxin exposure. Our bodies have natural mechanisms to cleanse & detoxify but our rapidly changing world has outpaced these mechanisms. As a result we have varying degrees of toxic burden leading to a variety of inflammatory symptoms, common diseases, fat gain and the struggle to oxidize excess fat. Yes, even if you eat healthy and exercise toxins are unavoidable. Of course a healthy diet and exercise will help to decrease the amount of toxins coming in and increase the amount of toxins leaving the body.... But the point is every day, every hour, every minute you can encourage your body to store fat, or utilize it for energy by the way you train, eat, live and the supplements you use to manipulate your hormones.

Fat loss and health improvement in today’s world, particularly for females, can be somewhat of a chemistry project to get the body back in balance and restore health. For the majority of people it is much more complicated and challenging than eat less, move more! (A great book on this topic for you ladies is *The Ultimate You – By Joe Dowdell*).

Let’s look at the calories in vs. calories out model.

To see the whole picture clearly we must bring training methods into the equation. As you’ll learn in my article ‘Optimal Training Methods for Physique Enhancement’, when trying to improve body composition training methods need to be selected based on what is going to produce the greatest RMR (Resting Metabolic Rate) and EPOC (Excess Post-Exercise Oxygen Consumption) response. No workout will burn more calories than your RMR.

A lot of calorie in vs. calorie out models don’t take into consideration the type of training that is conducted, often promoting aerobic type activity that has a minimal effect on RMR & EPOC, rather than recommending weight training which has the greatest effect on EPOC & RMR and overall fat loss... not to mention a better looking physique.

So, when designing a training plan to improve body composition we need to implement optimal training methods which result in increases in EPOC and RMR. In conjunction with this training protocol, a nutrition plan must also be implemented. You have to understand that not all calories are created equal; understand where the calories come from, how they affect us hormonally and how the body metabolises them.

Let's look at a chocolate muffin that has 230 calories compared to 2 large handfuls of almonds which also have about 230 calories - the almonds contain protein, healthy monounsaturated fat, calcium, magnesium, other minerals and fibre. The muffin is full of empty calories-lots of calories, no nutritional value- is high in sugar, which generates a big insulin response and ultimately causes fat storage. Same amount of calories, totally different hormonal response.

I could have 2 people: same training schedule, same weight, same age- all factors are the same including having them both consume 2000 calories per day. However, their 2000 calories are derived from totally different food sources. One could be on a high protein, low carb diet, whilst the other is on a high carb, low protein diet. What I'll get at the end of the experiment is two totally different body composition outcomes, even though they both consumed 2000 calories per day.

In today's busy world who has time to count every single calorie they consume?

I know I don't. It is by no means time efficient and for the majority will not produce the best result. If you are going to count calories you must use an equation that takes into account your individual RMR, the type of training you are doing and you also need to have a solid understanding of nutrition to ensure the calories you consume are from the right sources. You can't get away with eating whatever you like as long as it doesn't go over your 'x' calorie per day limit. From a training and nutrition stand point it makes no sense to have a nutrition plan/diet that solely focuses on calories.

Yes, calories are important but they are by no means the whole picture.

Finally another key factor to take into consideration is the Thermic Effect of Food (*TEF*). Foods such as leafy green vegetables have a thermogenic effect on the body- requiring greater caloric output to process and digest them. By adding greens to your diet, the leaner you will get due to the thermogenic effect of these foods. Whole proteins such as meat and fish are also very thermogenic and will result in rapid fat loss when eaten consistently even though they are potentially high in calories.

Throw away the scales! Being healthy and lean doesn't have to be complicated!



Misconception 2 – Eating FAT is BAD?

We're often told "Don't eat saturated fat it will clog up your arteries", "Saturated fat will give you heart disease", or "If you don't eat fat free you'll get fat". Which is of course true if you are eating the wrong fats (like transfats for example). Food companies have made billions from our fear of fat, but unfortunately while they get richer, our health gets poorer. Throughout the chemical processes implemented to make these products fat free, the healthy fats and much of the vital nutrients are removed and plenty of nasties added.

Over the last decade or so we've gone through the whole fat free revolution and as a result society has gotten fatter and fatter and as a whole much unhealthier. This is largely due to the fact that sugar and high fructose corn syrup (HFCS) has been added to just about every single food that's consumed by the majority of the population. It's not necessarily the fat- sugar, (particularly HFCS) is the single most fattening food known to man.

Finally the nutrition industry are beginning to acknowledge that sugar and refined carbohydrates are being excessively consumed by a majority of the population and it is this which is the leading cause of obesity, chronic inflammation and degenerative diseases that are at epidemic proportions in our society.

Now of course bad fats, like trans-fats, also known as hydrogenated fats, are effectively poisonous in the body and should absolutely be avoided at all costs. All I'm saying is a little bit of the 'right' fats in your diet can be very beneficial.

I highly recommend doing your own research on saturated fats. Here's two articles to get you started:

http://www.t-nation.com/free_online_article/most_recent/the_truth_about_saturated_fat
<http://jonnybowdenblog.com/new-cholesterol-guidelines/>

There has never been a more misunderstood facet of nutrition than that of *saturated fat and cholesterol*.

Of course, when talking about fats in our diet, the rule of 'everything in moderation' should be applied, as it should with any facet of nutrition.

The Low Down on Fats!

Saturated fats, unlike unsaturated fats, are highly stable, and not likely to turn into free radicals or go rancid when exposed to heat, oxygen, or light. So, it makes sense that these are the fats we should be cooking with - e.g organic grass-fed butter and virgin coconut oil. Unfortunately the majority of people get their saturated fat from poor sources like deep fried foods, processed deli meats and *hormone injected grain fed beef*. Saturated fat derived from healthy animals that are fed what they're meant to eat, organic butter and egg yolks is a completely different story.

Dr. Jonny Bowden states "he's never seen one convincing piece of evidence that saturated fat from whole food sources like the ones just mentioned has a single negative impact on heart disease, health, or mortality, especially when it's part of a diet high in plant foods, antioxidants, fibre and the rest of the good stuff you can eat on a controlled carbohydrate eating plan!"

Benefits of Saturated Fats!

- Saturated fats positively affect hormonal function, in particular free testosterone- which means more muscle and less fat.
- Animal fats contain fat-soluble vitamins and allow for their uptake. Do you throw away your egg yolks? If you do, you're missing out on about 18IUs of vitamin D and 245IUs of Vitamin A.
- Healthy Saturated fats can help your cholesterol profile and can help you live longer.

Often the problem occurs when the body is provided with fats and carbs together. The body is supplied with too much energy at once and thus sends some of this energy to fat stores. This is why you need to look at carbohydrates, not just fats. If you eat an excess of carbs, your liver converts them to fat (triglycerides) and they end up back in the bloodstream. Carbs should be used around your workouts for fuel or as muscle glycogen replenishment, not as a main staple of your diet (more on this later).

If you swap excess carbs with a little bit of the right sources of saturated fat (in moderation of course) and lots of non starchy veggies, you avoid excess carbs being converted to fat. "If carbs are low, insulin is low and saturated fat is handled more efficiently," said *Jeff Volek, PhD, RD* - one of the major researchers in the area of diet comparisons. "When carbs are low, you're burning that saturated fat as fuel, and you're also making less of it."

- Saturated fats make up at least 50% of cell membranes — Eliminating saturated fats from your diet will have an effect on how you look and feel- it's as simple as that.
- Saturated fats strengthen your immune system. Lauric acid is a saturated fat that has the ability to strengthen the immune system, which is why babies fed breast milk often have stronger immune systems as breast milk is high in Lauric acid.
- Coconut oil and coconut milk have large quantities of Lauric acid, which is why I recommend using these products when cooking. I generally recommend organic, non-refined virgin coconut oil so you can be sure it's not a refined product that's been bleached, deodorized, or tampered with any other chemical processes.
- Saturated fats also fight the bad bacteria in our guts and protect us from viruses, in particular Butyric acid, which can be found in grass fed butter - which always tastes good on some steamed veggies.

Fat Summary

It's crucial that you get your fats from the right sources; meaning the animals have had a diet that is natural to them; Not cattle that have been fed grains, opt for grass fed cattle instead, not fish that has been farmed and fed soy and grain pellets etc.

By no means am I endorsing excessive consumption of fat, you still want to consume lean cuts of meat etc. What I am saying is by implementing healthy fats in moderation conjunction with a low carb diet can be beneficial for your health...More on this later in the Controlled Carbohydrate/Paleo Overview.



The Big 3 To Avoid for Fat Loss & Improved Health; Alcohol, Gluten & Sugar

To maximise results it is **imperative** sugar, gluten and alcohol are minimised or avoided. If you are serious about achieving serious results having any of these in your diet will affect your end results, particularly if you don't metabolise carbohydrates well.

1. Sugar

Sugar is consumed in excessive amounts by the majority of the population leading to insulin resistance and ultimately Metabolic Syndrome – Which is the precursor to diabetes and heart disease. The common recommendations when it comes to sugar consumption is consume foods that have a higher fibre and protein content, generally these foods have a lower Glycemic Index. The G.I or glycemic index is a measurement of how quickly a carbohydrate is converted into glucose and taken up in the blood stream.

Why Is It Beneficial To Have Low G.I Foods?

Low G.I foods have slower uptake into the blood stream compared to high G.I foods. High G.I foods enter the blood stream faster due to the fact they are converted into glucose faster. Over time this continual rise in glucose can lead to all sorts of problems, including weight gain. What goes up must come down! This sudden drop in insulin can lead to low blood sugar levels (hypoglycaemia) which stimulates the appetite and craving for more sugar. Over time this insulin roller coaster wreaks havoc on your body composition and health.

A worthwhile read on the effects of Sugar is 'Suicide by Sugar': A Startling Look at Our #1 National Addiction (Square One Publishers, 2009). The author, Nancy Appleton cites these as her top 10 reasons to eat less sugar:

1. Sugar can elevate glucose and insulin responses and return them to fasting levels slower in oral contraceptive users.
2. Sugar can contribute to osteoporosis.
3. Sugar can lower the amount of Vitamin E in the blood.
4. Sugar can impair the structure of DNA.
5. Sugar can make tendons more brittle.
6. Sugar increases estradiol (the most potent form of naturally occurring estrogen) in men.
7. Sugar can lead to prostate cancer.
8. Sugar can contribute to mild memory loss.
9. Sugar can cause brain decay in pre-diabetic and diabetic women.
10. Sugar can cause endometrial cancer.

Fructose

If you think fructose is the answer to your sugar problems think again.

Fructose is referred to as a simple sugar, which means when eaten it is absorbed slowly in the intestine. When looking at dropping the fat a lot of people lean towards fructose consumption over other sugar sources e.g. glucose, sucrose. The problem with fructose is it can only be processed in the liver in two ways: used for energy by liver cells or get stored as glycogen in the liver.

How is this a problem?

If your diet consists of too much fructose there is only one destination for it – your liver. What this means is more than likely your liver glycogen or fuel tanks are full so the fructose needs to go somewhere. The body will convert the fructose into fat to be stored on other parts of the body and well hello love handles!

The main difference between fructose and glucose is that glucose can be used in other body tissues, namely your muscles.

Fructose Foods to Avoid

1. High fructose corn syrup. This bad boy is in everything and is a nasty one. Check the labels of all your foods- you'll be surprised how much of it you are consuming.
2. Table Sugar, 50:50 combination of glucose and fructose
3. Brown Sugar
4. Maple Sugar
5. Cane Sugar
6. Molasses
7. Concentrated fruit juice
8. Honey
9. Fruits
10. Vegetables

Avoid the top 7 of this list at all costs.

Fructose products are generally added to make your foods taste better, which in turn ultimately leads to overconsumption. Foods filled with fructose tend to fail to satiate the appetite and again lead you to eat more than is necessary.

This is due to inadequate stimulation of 2 satiety hormones: leptin and ghrelin.

Even though fruit can contain fructose its consumption is important due to the anti oxidant, vitamin, mineral and fibre content. Generally 2 pieces a day is recommended.

The key is to choose fruits that are lowest in fructose and only consume the high fructose fruits in the morning because this is when your liver glycogen levels are lowest. This means your liver will use the fructose for energy and what's not used can be stored in the liver and not converted to fat.

Fructose Summary

When we ingest fructose, it's quickly absorbed and shuttled off to the liver and stored as liver glycogen and will be slowly broken down as needed by the blood.

The issue is that once the liver is full of glycogen (liver only holds about 100 grams) it will convert any incoming fructose to triglycerides which is not ideal for body composition and health. Not only that but we want our muscles to be receiving the carbs to replenish muscle glycogen not our liver having priority.

As mentioned fruit is important to include in our diet due to the vitamin and mineral content, but if you're struggling to drop body fat if everything else in your diet seems to be good or if you're struggling to drop that last little bit of body fat it may be the fructose. Start with looking at your food labels then look at your fruit consumption.

All sugars should be avoided.



2. Gluten

Something that may take a little bit of getting your head around is not having your usual white bread and boxed cereal for breakfast. For fat loss, I recommend reducing your grain intake initially, particularly from your processed High G.I carbs. This prevents constantly high insulin levels that comes with these foods and makes the body resistant to insulin leading to diabetes. This is why it's best to eliminate grains initially, whilst introducing some resistance training. By doing this you will improve insulin sensitivity and fat loss. After the initial '2-4 week No Carb Mission' has been completed I recommend reintroducing gluten free grains back into your diet rather than heavily processed white grains.

Gluten has been shown to affect the body in many ways, as you'll read in the below links. The best way to see if you have a gluten intolerance that may be causing you inflammation, elevated cortisol production or even decreased cognitive function is to eliminate gluten completely for 6 weeks and see if you notice a difference.

By eliminating gluten you'll achieve two things:

1. Reduce large raises in insulin and carbohydrate/calorie hits that comes with these types of food.
2. If you do have a gluten intolerance, every time you consume gluten the body will release cortisol to deal with the stressor/gluten. As you'll read in the 'Hormones Affecting Your Health & Fat Loss' section, excessive cortisol leads to adrenal fatigue, muscle degradation, depression, poor immunity and illness.

Removing gluten from your diet is recommended for improved body composition, digestion and health.

I recommend these three articles by Charles Poliquin for further information about the dangers of gluten:

http://www.charlespoliquin.com/ForWomen/AskCharles/Question/1689/My_budget_is_very_low_How_can_I_tell_if_I_am_glute.aspx

<http://www.charlespoliquin.com/Blog/tabid/130/EntryId/120/Top-12-Reasons-Gluten-if-sensitive-to-it-Should-Be-ELIMINATED-From-Your-Diet-Part-1.aspx>

<http://www.charlespoliquin.com/Blog/tabid/130/EntryId/121/Top-12-Reasons-Gluten-if-sensitive-to-it-Should-Be-ELIMINATED-From-Your-Diet-Part-2.aspx>

3. Alcohol

You can't drink grog and expect to drop body fat. Alcohol is essentially a carbohydrate when looking at its chemical structure, and the way it is metabolised in the body is actually worse than carbs.

The alcohol labelling regulations that allow beer to be labelled 'zero or low carb' are not necessarily accurate. When a carb is consumed it is converted to glucose to be used by the cells of the body for energy, function, muscle & liver glycogen replenishment (remember glycogen is stored as glucose for energy at a later use). Muscles generally take preference for glucose and the liver only requires a minimal amount to complete its functions.

The problem with alcohol is that it must be processed through the liver. When it is processed through the liver it has to work 4 times as hard to use it. This promotes fat storage, increases bad cholesterol (LDLs), insulin resistance and messes with your blood sugar causing you to crave carbohydrates. So, drinking alcohol combined with eating chips and the like is a double whammy that guarantees fat gain.

Not only will excess alcohol consumption make you store more fat, it will increase your chances of liver failure, cancer and often the serious issues associated with diabetes.

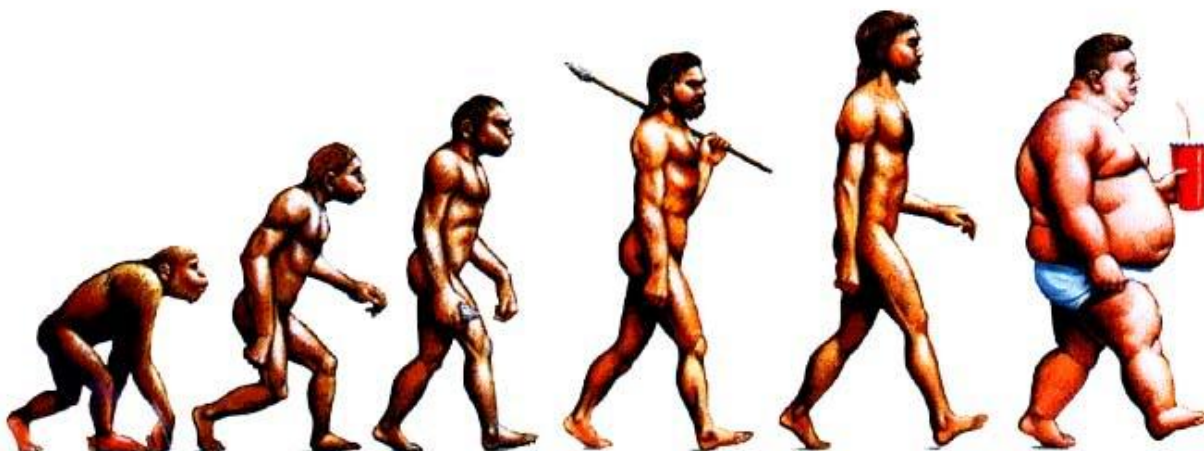
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3. FFm Fitness Fads Debunked pg 3 'Can you Booze and Still Lose'?

Paleo/Controlled Carbohydrate Diet Overview

The Ultimate Physique Enhancement plan leans towards a Paleo style or what nutrition expert Dr. Johny Bowden refers to as a *controlled carbohydrate plan*. Strict Paleo living eliminates carbs completely, which is not what we want long term, but is exactly what we want to begin with, as you'll learn later in the '*Metabolic Switch 2-4 week No Carb Mission*'.

This section is designed to give you an overview of the Paleo style of eating and why eating this way is beneficial not only to look better but for your overall health and wellbeing.



After you've read the Paleo/Controlled Carbohydrate Diet Overview, there is the '*Metabolic Switch 2-4 Week No Carb Mission*'. This section must be read thoroughly, it is the nutrition plan all fat loss participants will follow to begin with.

Before reading on, the nutrition and training recommendations in the UPE system have been designed specifically to achieve your Ultimate Physique. If you are competing or training for endurance type sports like triathlons or marathons then your energy demands are different and I would not recommend this nutrition plan or the UPE system.

Adjustments would need to be made to suit your specific training and energy requirements.

The Caveman Approach to Eating

A diet couldn't be any simpler or effective for fat loss and halting or preventing a number of degenerative diseases. This is why it should not only be a diet, but a way of life. In order to be serious about your goals you must be conscious about what you eat every single day, not just the next 56 days.

By implementing this plan after a few weeks you will be more in tune with your body than ever before. You will start to become aware of how different foods really affect your body. By following this plan for the rest of your life you will benefit from increased energy levels and overall improved health.

A Paleo diet is based on the idea that the original human diet, consisting of foods that hunter-gatherers ate in the Stone Age, continues to be the most suitable diet for humans in the 21st century. While the Paleo diet is what I recommend to structure your long term eating around, the implementation of carbs as per the 'Refuel Meal(s) Guidelines' and 'Carb Cycling Plan' aka controlled carbohydrate plan is necessary for achieving long term results. Total elimination of carbs long term, particularly when training is not the answer for creating and maintaining your ultimate physique for life.

What are the differences between our diets and those of the cavemen?

In the Paleolithic era, only those foods that could be eaten in their raw state were consumed. This ruled out grains, legumes, and starchy veggies like potatoes. Milk and dairy products were not consumed and refined sugar other than occasional honey, or any processed foods, were totally out. Their diet consisted of meat, nuts, vegetables (especially green veggies) & fruit. It's estimated that 70% of their diet was of animal origin.

Fats

One major difference between Paleolithic Diets and today's standard diet is the difference in the *types of fats* we consume:

We consume far less omega-3 fat, and more omega-6 fat and trans-fats. Excess Omega 6 fats contributes to the inflammation causing many of our modern chronic diseases, including heart disease, diabetes, and arthritis. While omega 3's are anti inflammatory - It's recommended we have an omega 6 to omega 3 ratio of 1:1-4, it estimated that our current diet has it at 15:1 with some estimates having it even higher.

Carbohydrates

Palaeolithic people ate a diet that consisted of far less carbs than today's diet.

Carbohydrates probably contributed to about 20 to 40 percent of the calories, and none of it consisted of processed sugars and grains.

Meats

Meats (including seafood) and eggs are perhaps the most important components of the Palaeolithic Diet. Ideally, the animals from which the eggs and meat come from are fed a natural (to the animal) organic diet.

Fruits

Fruits are generally allowed. People who need to lose weight should limit consumption of high sugar fruits & juices, until body fat drops. As body fat goes down re-introduce whole fruits (but not juices) back into the diet.

The following categories of food are forbidden on Palaeolithic-type diets.

- **Refined Sugars**
- **Grains**
- **Starchy Vegetables (Potatoes)**
- **Legumes (Beans, Peas, Peanuts)**
- **Dairy Products**
- **Some Meats-** Most processed meats (made with nitrites and additives) are not allowed, including hot dogs, bacon, sausage, and lunch meats, sometimes more healthy forms of these can be found.

Oils

Definitely **avoid** the following:

- Corn oil
- Cottonseed oil
- Peanut oil
- Soybean oil
- Rice bran oil - best choice of oil from this list. If using large quantities of oil e.g in a restaurant this is the healthiest from a commercially viable point of view.
- Wheat germ oil

In Summary: Foods To Avoid Completely

- Any processed food, grains (except for very small amounts of whole grains), legumes, dairy products, and food additives such as artificial sweeteners and minimal tubers such as potatoes

Allowed Foods:

- Organic as much as possible; Meat, fish, eggs, vegetables, fruit, nuts, honey in small amounts. Again ideally, animals consumed should eat a diet natural to them -- in other words, cows should eat grass, not grain, etc.

Applying Paleo Eating Long term

fat loss the UPE system requires strict paleo or what I refer to as the '2-4 Week Metabolic Switch, No Carb Mission'. After this period you will then refer to the 'Refuel Meal(s) Guidelines' or 'Carb Cycling Plan for Muscle Mass'. It really all depends on your tolerance to carbohydrates and overall body composition.

For this initial period to make it easy there is a specifically designed meal plan for you to follow, but if you simply eat like a caveman you'll be on track. If unsure whether you can eat something ask yourself this question "would a caveman eat this".

The Metabolic Switch: 2 – 4 Week No Carb Mission.

The focus of your diet plan over the next 2-4 weeks is to aggressively attack your stored fat and turn on your lipolytic genes (fat burning) and turn off your lipogenic genes (fat storing).

How Do You Do This?

The first order of business is to make your body a predominant fat burner rather than a predominant carb burner. After this initial 2-4 week no carb mission (carbs from veggies excluding starchy are always allowed in unlimited quantities) you can reintroduce carbs into your nutrition plan relative to your body composition and girth measurements.

The leaner you get the more carbs you can have. There's one thing that all physique enhancement specialists agree upon and that is the more body fat you have the fewer carbs you should consume. This goes both for the quantity and frequency of the carb intake. The leaner you are the more carbs you can have on a day-to-day basis and the more frequent carb-ups you can have.

Your girth measurements and current body fat percentage dictates the length of time you are on the 'no carb mission'. If you are a male and your waist measurement is over 100cm and or body fat is above 20% I suggest a 'No carb mission' (strict Paleo) for 4 weeks, if you are female and your waist measurement is over 90cm and or body fat above 23% I suggest the 'No Carb Mission' (Strict Paleo) for 4 weeks. If you are below these measurements you will be on the no carb mission for 2 weeks.

The METABOLIC SWITCH EXPLAINED!

Your body is accustomed to synthesizing carbs for energy as this is the bodies preferred energy source and then fat. When consumption of carbs is in excess you minimise the body's ability to tap into your fat stores for energy and end up making and storing more fat.

Why?

Firstly you need to understand insulin, insulin sensitivity, insulin resistance and the role of insulin in diabetes and in particular type II diabetes.

Insulin

Insulin is a very important hormone that can dictate your energy levels, how much fat you store and lean muscle mass you have. It is a complicated but very important hormone that needs to be understood and managed to achieve your Ultimate Physique & health goals. By learning how to control your insulin you effectively control your body composition, that's how important this hormone is.

If you're serious about improving your health and decreasing your body fat, it's crucial to address and understand hormones (if you haven't read the hormones affecting your health & body composition read it now). Often when one hormonal pathway is out of balance it's not long until another is imbalanced. It's important to understand that treating one hormone in isolation can be problematic. In order to achieve your Ultimate Physique all hormones must be in sync.

The first step to achieving hormonal balance is reducing your carbohydrate intake. Doing so will have a profound effect on hormonal pathways responsible for encouraging your body to burn fat and not store fat. When you eat carbohydrates they are converted into glucose, which goes into the blood stream. Insulin is then secreted from the pancreas to process the blood glucose. In a healthy body the insulin binds with receptors in the cell. When a cell has insulin attached it acts like a messenger to allow glucose into the cell to be used for energy.

Our goal is to make our muscle, fat & liver cells more receptive to insulin's messengers and not resistant to insulin's messengers (*insulin resistant*). Insulin resistance occurs from a lack of physical activity and the consumption of a high carbohydrate, particularly high G.I, sugar diet causing excess insulin to be secreted frequently in high amounts. In an unhealthy body the cells become resistant to the 'messenger' knocking on the cells door, in an effort to be heard the pancreas will secrete more and more insulin. The production of excess insulin creates havoc on your body composition and health leading to type II diabetes amongst other serious issues.

The more sensitive your cells are to insulin, the more effective your cells will be at using fat for energy. Insulin will be prohibited from sending a message to fat cells to increase fat storage and decrease fat burning. By keeping carbs sufficiently low for the first 14-28 days on the 'no carb mission' your body switches to a fat metabolism; this is called the 'Metabolic Switch'. Switching from a carbohydrate to a fat metabolism has some real advantages for anyone looking to transform their body.

Now I'm not going to tell you adapting to this new nutrition regime is going to be easy, as with anything new there is an adaption period. While the metabolic switch is occurring you may feel sluggish. Get through the initial 7 -14 days and you will have improved mental focus, ability to tolerate stress, sleep quality and quantity, clearer skin and more energy than ever. Don't confuse this short period for the whole plan.

What's important to understand is that carbs are not the enemy- *if* we consume the *correct* carbs at the *correct* times in the *correct* amount. The first order of business though is to make sure your body is metabolising your carbs effectively. If you've been abusing carbs for a long period of time this will take a little longer, limiting their consumption is crucial. However a long term zero carb policy for the majority of people is a misguided approach. Once your body metabolises carbs more efficiently, consuming carbs will actually be beneficial for your body composition improvement.

Post weights session is when your body is most insulin sensitive and will benefit from the consumption of carbs in this time. Doing so will spike your insulin levels which will shuttle

amino acids into the muscle tissue to help recover and replenish your depleted muscle glycogen stores.

Understanding Glycogen Utilisation

Your muscles are like tanks for glycogen, they fill up and empty again when you workout. Unfortunately when you eat too many carbs these tanks overflow. Some glycogen is then stored in the liver and any excess is converted to triglycerides and stored as fat. This is where traditional high-carb diets can let you down.

So why fill them at all?

Muscle glycogen means better performance in the gym - You load up on it and fill your tanks. By the end of your low-carb period you have once again emptied the tanks and you repeat the cycle over again.

Getting this balance right can be a little tricky and some trial and error is needed, here are some key points to help.

Understanding the Metabolic Switch: Some Key Points

- Complete the 2-4 Week No Carb Mission. *Remember:* Carbohydrates derived from vegetables do not go towards your daily carb allowance. You can have as much salad and vegetables as you require (excluding starchy vegetables like potato).
- Ensure 30g of fibre is being consumed per day. Why?
 - Fibre blunts post meal insulin and glucose levels.
 - Creates slower and lower production of insulin by the pancreas.
 - Helps metabolise Xenoestrogens (represented by a high hamstring)
 - Grainless fiber sources are best.
- Once body fat begins to come down consume carbohydrates post workout.
- Implement a refuel day (higher carb day), if you're getting improved body composition at this ratio then begin to implement more refuel meals throughout the week. Getting the correct carb intake requires a little trial and error to get right.
- Stay away from fructose syrup at all costs, it is the most fattening food we know of and it ages you; it is found in the majority of sweet processed foods and pretty much anything in a bottle. *Avoid it at all costs.*
- **Best carb sources:** green veggies (broccoli, spinach, celery, asparagus, cucumbers, lettuce etc.)
- **Can-have carb sources:** other veggies (except potatoes), berries (blueberries, raspberries, strawberries, blackberries, etc.)

Understanding the Metabolic Switch: Some Key Points (Continued)

- **Occasional carb sources:** Other fruits
- **Rare carb sources:** brown rice, whole wheat bread, whole wheat pasta, wheats and grains, potatoes
- **Should-avoid carb sources:** white bread, white pasta, etc
- **Fibrous Carbs/Vegies to eat most;** Your fibrous carbs are typically low carb. High fibre foods generally have a very moderate insulin response, this is ideal for fat loss.
- **Fruit Tips from Charles Poliquin- The darker the fruit, the better it is for you.** Dark fruits tend to have very thin skin, (hence they need to produce more anti-oxidants to protect themselves from the sun). That is why darker fruits are great anti-inflammatory foods. Bananas have thick skins therefore they have lower anti-oxidants contents.
- **The darker the fruit, the lower the glycemic load.** Again, compare berries, and cherries to bananas and pineapple. Of course, this applies to fruits in their natural state; when grapes become raisins, their glycemic index goes up because of dehydration of the fruit.

