Get Shredded v1.0
SYSTEMATIC.QUANTITATIVE.UNIFIED.AESTHETIC.TRANSFORMATION.SYSTEM
**Disclaimer**

Be informed that this book is solely written based on my personal experience and in no ways claims that the information in it is 100% verified, as there are more and more researches coming every day, discretion is advised. Furthermore nothing contained herein is to be construed as Medical Advice. Use of any supplements/drugs and exercise regimen should only be done under the directions and auspices of a licensed physician. The writer does not claim to be a medical doctor nor does he purport to issue medical advice.
First of all, let me congratulate you.

You wouldn’t have taken time to start reading it if you were not ready to change. This shows you’re ready to begin your transformation journey.

JC
# Index

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Introduction

So without wasting time, let’s get started.

This was me, 1 year back

This is me now!

I have been working out for almost 6 years on and off based on what so called “experts” have been telling me. However, after marriage, I put on a lot of weight! Happens right? Office stress and managing house budget further deteriorated my condition. I was not able to go to the gym for almost a year, resulting in all my muscle mass getting lost while the fat kept on increasing. However in November 2013, after changing my stressful job, I started going back to gym again. I weighed around 84kgs with a bf of around 16%. It was that time around, Kriss-3 was being promoted in India and there were posters of Hritik everywhere making rounds and creating buzz. Aesthetics were in! I too wanted to get the chiseled look and beach body which I could have throughout the year rather than bulking for months and then again cutting back for months. I was tired of that nonsense.

So I knew right then what I wanted, I had a target in mind, but I did not know how to reach there. I did not have any mentor. All I knew were the common. Bodybuilding fundas that are prevalent for eg. Creatine is not good, it hurts liver and that it causes bloat and water retention. Heavy weights for gaining mass and light weight, more reps for cutting and all that misinformation. It worked for me so far why I would even bother questioning it. I had a decent body. Using the same fundas, I knew I had to lean out first to reduce my fat so I thought, let’s do cardio everyday along with weight training and I reduced my calorie intake. After around 3 months, I looked like this.

I was around 73kgs now, so I lost a total of 11kgs, for most people this would be amazing. For me, it was complete disappointment!! I checked my bf levels, they were only down by
2% so while I lost 11kg of my weight, I lost only 2% body fat. So then what exactly did I lose? Was it muscles? You're god damn right!! I lost a lot of muscles!!! And on top of that I messed up my metabolism where I was barely consuming 1500 calories a day! Anything I was eating was converted to fat and so I further reduced my calories and it kept getting worse until I came across this bodybuilding.com article that changed my entire perspective.

After that, all I did was read more and more. And when I did that I realized how much misinformation is prevalent in the current scenario. How these so called “experts” are messing up an entire generation of promising bodybuilders by giving them wrong information. They have to lie to you, because they cannot tell you that they are injecting steroids to achieve desired results and so they have to make up things to make them sound authentic like oh man, I workout so much, oh man I eat so much food, oh I have naturally good genetics! You know what? These are lies!

This entire guide is about what my experience, my leanings and my journey from being at 14% bf to currently at 4.6% bodyfat. Neither did I do anything stupid, nor was I dehydrated. They say the bodybuilders are very weak on the day of the competition. Hey I did 39 strict pull-ups and a workout too.

But enough of me, let’s get to you.
The Basics

You have to understand, we’re not actors who roam around with their chefs cooking the high protein meals! We don’t even have a lot of money to spend on all sorts of pre-workouts, fat-burners, casein, hydro-whey and all that high end expensive stuff. I am a middle class husband and a father who works for a software company. We have to do the best with whatever we have available in low budget.

Before beginning, please understand a few things very clearly

1. Bodybuilding is science. You’re getting results without a proper plan for nutrition and workout? Good for you, please move on
2. To lose weight you have to take lesser calories than your BMR*, to gain weight you have to take more calories than your BMR*

That’s it, there is no other way around these two things. Let science guide your transformation journey not bro-science.

I figured the best way to tell you everything would be to start from the start. It will be boring initially as its all science and stuff, but trust me, you’ll see almost 99% of the things are relevant. So please don’t skip anything and if possible read again and again. Good luck!

Metabolism

Your body is like a car, it needs fuel to run. However unlike a petrol or diesel car, your body can use multiple fuels. In simple words, the process, in which your body uses the fuel to provide energy to your body is called Metabolism.

Food contains ingredients which your body can use as fuel. But even fuel is not yet energy! If I give you fully charged battery, try using it to bake an egg. Having an energy containing fuel does not mean that it is ready to use.

It all starts with food, and its metabolically active ingredients

- Fat
- Fiber
- Long Carbs
- Short carbs (Sugar in other words)
- Protein

Fat contains 9 calories (kilocalories) per gram, Carbohydrates and protein contain 4 calories per gram. While fibers do not yield any energy, they are extremely important in making digested food leave your body. They help in digestion as well.

Now, what are these fuels that we’ve been talking about, so far we’ve only discussed the fuel sources. Let’s have a look

Your body can extract at least the following three kinds of fuel from what you ingest:

- Fatty Acids
- Glucose
- Amino Acids
- Fat -> fatty acids
- Fibers -> used for excreting ingredients
- Long carbohydrates -> shorter -> glucose
• Shorter carbohydrates (‘sugars’) -> glucose
• Proteins -> Amino acids

Now we know what the fuels are, it’s time to understand how they are stored in the body. Different kinds of fuels are stored in different forms and different amounts.

**Fatty acids**

Almost any cell can store fatty acids, they can also be transported directly in the bloodstream - no conversion is needed. If it turns out that you do not have enough cells to store all fatty acids, your body can easily generate special ‘adipocytes’, which put together form the so called ‘adipose tissue’.

As can easily be observed, the body easily stores tens of kilos of fat. As each kilo of fat can power an adult for many days, an average person will carry enough energy to survive for a month. An overweight person often carries enough fuel to survive for months on end. But hey all this doesn't make fat bad. Just remember, you can survive without carbs, but without essential fats your brain will stop working. So never ever cut down fat completely from your diet. You need around 40gms of essential fats every day.

**Glucose**

Glucose is a very small molecule and easily travels from cell to cell. In this way it is easily transported. This motility is not very well suited for actually storing sugars, so for storage, sugars are converted to glycogen. Glycogen is a molecule which consists of lots of smaller glucose. This size makes it easier to store.

As glycogen, sugar is stored in the liver and in muscles. Both liver and muscles can convert glucose to glycogen. The liver can convert glycogen back to glucose but muscles can’t. Muscles can however use glycogen directly if needed, or release it into the bloodstream.

What is very notable, is the limited amount of sugars which can be stored. Ingested glucose and small carbohydrates like table sugar travel nearly directly to the bloodstream. While this allows the body to rapidly utilize ingested sugar, the amount of glucose allowable in blood is easily exceeded.

People of average weight will generally have in the order of 5 grams of glucose in their blood at any one time. Levels above 10 grams are considered too high. **This means that a regular candybar, which contains approximately 30 grams of sugar, poses a great challenge to the body.**

When glucose arrives in excess of 10 grams the body releases insulin which instructs the liver and muscles to absorb glucose from the blood. Furthermore all parts of your body which can run on glucose start doing so. The burning of fatty acids is reduced.

Beyond the bloodstream, the body can store a few hundred grams of glucose. Amounts differ with body mass and bodily condition but is generally in the order of approximately 150 grams. The glucose storage can generally be depleted in a single day, making it a very short-term fuel.

Longer carbohydrates cannot transfer to the bloodstream and must be converted first, which can take quite some time. It’s actually a good thing because it makes sure that the blood isn’t flooded with glucose, thus preventing any insulin spikes (Remember, insulin spikes are bad as they indicate that your body does not need to burn fat)

**Proteins and Amino Acids**

These are bound throughout the body, either bunched up as proteins or freely available. They can be converted into muscles or cells or lots of other things, which can also be broken down again into proteins or even amino acids.

Proteins are broken down to amino acids in the intestine and then brought to the liver, where they are partly reassembled and partly released into the bloodstream.

Compared to glucose, a lot of protein is available at any one time. The blood alone will contain in the order of approximately 100 grams.
Compared to either glucose or fatty acids, amino acids also have "huge" uses. It might be stated that you ARE amino acids. They make up your DNA and mostly everything else that is interesting. I find it somewhat revolting that the body actually burns amino acids!

I know it's all so scientific stuff and you're waiting to the part where all the goody good information comes, but hang on, whatever good is going to come, will come out of this scientific information and this information alone. So don’t do the mistake and keep reading.

The Actual Energy

So, now you have the petrol in the storage tank, but can your car start just by that? No. you'll have to trigger the start button, the petrol will get combined with air and ignited in the combustion chamber, resulting in a short burst of very powerful energy which will drive the pistons. In case of body, this energy is called ATP (Adenosine Tri-Phosphate)

As said, your body stores its energy in the form of the three different fuels. To be used, these fuels must be converted to ATP. This can be done in lots of places.

Glucose

Glucose, stored in the form of glycogen, can be converted into ATP by all cells containing mitochondria, which means nearly all of them. Muscles can even burn glycogen directly.

Fatty acids

Much the same goes for fatty acids, with the very notable exception of the brain. Fatty acids cannot cross the barrier into brain cells.

The brain uses loads and loads of energy which is a major challenge for your metabolism - the organ which uses most energy prefers to run on the fuel that can be stored worst.

Fatty acids can be converted to ketones, which can partly power the brain.

Amino acids

Can be converted by the liver into glucose, or even into fatty acids.

Almost everything can be converted to everything else by the body. But not always and not everywhere. Important conversions are:

- From glucose to glycogen to stored fat
  Mentioned earlier, this is done when your sugar intake has exceeded the storage capacity. This happens a lot. Remember the insulin spike?

- From stored fat to glucose
  Creating glucose from non-glucose parts is called gluconeogenesis and is very important. It helps you power the brain from long-term energy storage (fat).

Yes that's all you need to know about fuels and storage, but hang on, the interesting stuff is yet to come. Don't you want to know where and how all this ATP or energy is used in the body? And also that why do you feel hungry even though your body has lot of stored fat in it?

Why Do I Feel Hungry?

Well, Energy is clearly spent when you do bodily work but as it turns out, the vast majority of work is latent – it happens anyhow without you noticing it. This is called the Basic Metabolic Rate (BMR) and it is a lot.

The body spends energy on pumping your blood around, for example. Every hour, about 80 liters of blood pass through your kidneys which is a lot by any standard. Furthermore, the body needs to do work to keep
you warm enough. Then there is the brain, which always requires a lot of energy, even when not thinking.

Actually doing things requires surprisingly little energy compared to the BMR. However, you can easily raise your BMR by exercising - while the exercise itself does not really cost a lot of energy, the bodily infrastructure created for it will. For 24 hours a day onwards

The body does not always expend energy the same way and in the same amounts. This has all to do with strategy. This strategy appears to be a lot like a modern laptop: to go on as long as possible on the available fuel. Such a strategy boils down to spending a lot of energy when it is abundant and powering down in its (perceived) absence. It also means whining for more energy even when a lot is available like a laptop claiming that its battery has run out when in fact is has hours left.

The body appears to have quite an attitude. As mentioned before, most healthy adults carry enough energy with them to survive at least a month. Most of us carry around more than that. While ‘surviving’ sounds big, it could probably be said that not eating for a whole week would not even tax the prowess of our metabolism.

Yet after skipping lunch, you will probably feel starved by the time you eat dinner. How come? Well, it’s a strategy. The body appears much attached to its energy stores. So attached that many of us grow very overweight - and still we feel hungry after missing a meal!

Strategy in detail- The strategy employed governs how energy is spent and how it is ingested. The latter part is easy. Whenever the body runs short of one kind of fuel, it sends unmistakable signals that you should eat, even though it could also deal with the situation by conversion.

Regarding energy expenditure, the human body is generally described to be in any of three states: fed, fasting or starved. ‘Fed state’ starts sometime after eating and continues for a number of hours, after which the metabolism is said to be ‘fasting’. When asleep, the body is fasting. Which is why we take ‘break-fast’.

Starvation only occurs when eating does not occur for an extended period of time.

Now, when food has not arrived for a while, the body starts conserving energy. There are a lot of ways to do so- lowering the body temperature a bit, neglecting body maintenance, slowing down the brain etc.

We’ve been discussing food for so long now, aren’t you wondering where water comes into picture?

**Role of water**

Let’s discuss blood too, the blood serves as a medium for distributing fuel but it also works the other way, In taking away stuff, cells have discarded. If left uncleansed the bloodstream would quickly become polluted. So there are at least three organs working on cleaning it up: two kidneys and the liver. The kidneys function primarily as sophisticated filters. As long as things are kept wet enough, they are able to remove waste from the blood by osmosis. This waste may be treated further and is sent to the bladder.

The liver is a lot more complex and actually converts a lot of waste products into usable substances again. It can also break down molecules which cannot be filtered by the kidneys. Almost all energy conversions taking place in your body are centered on the liver.

As mentioned, the kidneys need water to function, they need to be wetter than your blood. If they cease to be so, they become unable to filter the blood, leaving (part of) this job to the liver. The liver then becomes occupied doing that and has less time or capacity left for conversions.
When this occurs the body may really become starved. The liver is unable to furnish the brain with sugar and no other energy sources are available. This quickly leads to a dizzy feeling and general incompetence.

**Conclusions**

This is the moment you’ve been waiting for - All the science is no good if we cannot put it to some good use for our own benefit. Here are few things

- If you take any more than approximately 10gms of sugar, your body will trigger insulin which will further indicate that body should stop burning fat. So stop eating Sugar! It’s literally poison for your body!

  In order to lose weight, we must make sure that the following conditions are met:
  - Energy intake is decreased and energy is used and not stored
  - Energy use must not be diminished
  - Stored fuels are able to deliver the missing energy
  - The body is a simple container - to lose weight, more energy must be expended than is added. If done wrong, eating less(for example by skipping breakfast) will actually gain you weight
  - Drinking plenty of water will actually allow liver to do the conversions and burn fat, so in a way drinking more water does help burn fat

I have divided the book into three main parts, *Nutrition, Training and Supplements*. I will discuss Nutrition first, then training followed by supplements in the order of their importance.
Nutrition

There are so many people who work very hard in the gym and yet they don’t get results. I’ll share my personal experience with one of my clients, Pavan. When Pavan first came to me, he was working out for two years and had an ok looking physique, stomach was flat though, and definition was lacking. He was around 12% bodyfat with a muscle mass of around 41kg. After 4 weeks of following my diet, he’s now at 8% body fat and muscle mass of 43kgs and he can see his abs. What changed? Diet my friends, diet! Most people would say its 50% training and 50% nutrition. I’d say its 80% nutrition and 20% training!

To start with you have to know your basal metabolic rate (BMR) or your resting metabolism.

Calculating the BMR

First things first, you need to calculate your BMR, I hope you know why we’re doing this? If not please go back and read it again. Here’s the formula:

**English BMR Formula**

**Women:** BMR=655+(9.6 x weight in pounds)+(4.7 x height in inches)-(4.7 x age in years)

**Men:** BMR=66+(13.7 x weight in pounds)+(5 x height in cm)-(6.8 x age in years)

**Metric BMR Formula**

**Women:** BMR = 655+(9.6 x weight in kilos)+(1.8 x height in cm)-(4.7 x age in years)

**Men:** BMR = 66+(13.7 x weight in kilos)+(5 x height in cm)-(6.8 x age in years)

Alternatively if it’s looking too complex, you can do this from our website:

[www.squats.in/tools](http://www.squats.in/tools)

Enter your height, weight, age and you’re good to go.

Once you know your BMR, you can calculate your Daily Calorie Needs based on your activity level using the **Harris-Benedict Equation**.

To determine your total daily calorie needs, multiply your BMR by the appropriate activity factor, as follows:

If you are sedentary (little or no exercise): Calorie-Calculation=BMRx1.2

If you are lightly active (light exercise/sports 1-3 days/week): Calorie-Calculation=BMRx1.375

If you are moderately active (moderate exercise/sports 3-5 days/week): Calorie-Calculation=BMRx1.55

If you are very active (hard exercise/sports 6-7 days a week): Calorie-Calculation=BMRx1.725
Total Calorie Needs Example

If you are sedentary, multiply your BMR (1745) by 1.2 = 2094. This is the total number of calories you need in order to maintain your current weight.

Once you know the number of calories needed to maintain your weight, you can easily calculate the number of calories you need to eat in order to gain or lose weight.

Since our goal is to get shredded, we'll have to reduce our calorie intake. **Those looking to gain weight** can follow the same routine, except that they have to increase their calorie intake above the BMR.

Remember, if you don't count your calories, your results won't be quantitative and you'll have to rely on hit and trial, so I suggest you do count your calories. Most of the food we consume has label indicating both macro (protein, carbs, fiber and fat) and micronutrient content (Vitamins, minerals).

Lean Mass calculation

Now we all know how to calculate our BMR, but it is to be noted that before calculating the BMR we should know the value of our body fat. Basically our body fat percentage decides if we need to calculate our BMR by considering our total body weight or our lean body mass. Lean body mass is basically the fat free mass in our body. Its also not your muscle mass so kindly don't get confused between the two. Normally if your body's fat percentage is more than 20, it is advised to consider the lean mass to calculate the BMR. There is a very simple formula that is been used to calculate the lean mass i.e.:

Lean mass = total body weight – (Body fat % x total body weight). For example if a person is weighing 100 kgs and has bf% of 40 then his lean mass would be – 100 – (0.40 x 100) = 60kgs.
So the above person should calculate the BMR by putting his lean mass i.e. 60kgs instead of total body weight i.e. 100kgs.

Now I'd be giving out my personal diet but what worked for me, might not necessarily be working for you.
You know the saying “give a man a fish, you feed him once, teach a man how to fish and you feed him for a lifetime”. I am going to do the latter. A lot of personal trainers and “dieticians” are going to hate me 😊

I will discuss the following diets. Ratios for the macronutrients (carbs, protein, fat) are mentioned in the same order:

**Low carb (25:45:30)**
This would be required to trim excess body fat, while making slow lean gains. It is effective however takes a lot of time to show results (ideal for anyone who's new)

**Zone diet (40:30:30)**
This would be required to build up lean muscle throughout the year (For people who are already muscular)

**Depletion Diet (Dynamic)**
To reduce body fat% dramatically and bring definition to your muscles in very short period (not for
Ketogenic diet (5:35:60)

Similar to Depletion diet, Keto diet will also target your body fat levels dramatically. It engages your body in producing more ketones (will discuss in the diet sections) hence the name, Keto diet. It is an ideal diet to start with if your goal is fat loss.

I will also cover peak week and carb loading. In brief however, since it's a very complex subject and a lot of research is still going on about it.

Warning: Depletion diet requires immense knowledge and understanding about body composition and should only be attempted if you're an advanced level athlete and are below 10% body fat. It can screw up your metabolism if done wrong, not to mention causing muscle loss and hormonal imbalance.

Now most of the fat loss diets (which actually work) are based on simple principal-reduced carb intake. Consider the scenario.

You have a car, it has diesel in tank and in reserve. Now as long as there is enough diesel in the tank, the car won't burn the diesel in the reserve. Similarly, in our bodies. glucose (sugar, carbs) is the fuel in the tank and fats are the reserve. You have to deplete your body of glucose (sugar, carbs) in order to burn fat.

Before you start planning your diet, you have to calculate your BMR as mentioned before. Figure out how many calories you're going to consume to reach your target goal and then based on the diet you have to divide your macronutrients into ratios.

Remember, BMR only provides a baseline, many people have the metabolic rate above it or under it and therefore BMR should not be considered a universal indicator of one's metabolic rate.

Low Carb Diet: Since we're looking to get shredded by low carb diet, our Fat: carbs: Protein ratio should be 30:20:45. Of course there will be slight variation, but that is fine. It's just to give you an idea and stress on the fact that your carb intake will be the lower while protein intake will be the highest, almost double the amount of carbs.

To help you understand more efficiently, let me give you an example

I am 28 year old and 5'10 weighing 75 KG, after calculating my BMR (say 2000) I calculate my daily calorie need using the Harris Benedict equation (mentioned above) and my calorie intake comes to about 2300 calories a day considering I do light exercise (just an example)

Now to start losing weight (fat, not muscles) I will design my diet in such a way that I will have a macro ratio of 20:45:30 in a calorie deficit mode

How many calories you need to reduce? It's up to you. However, the body does not like dramatic changes. And it retaliates in a dramatic manner, leading to loose skin, water retention etc. (will address these problems in later part). It's better to lose weight gradually than dramatically. So I'd suggest a cut of 200-300 calories in first couple of weeks to start noticing change. And then further down by 400-500 in subsequent weeks to start fat loss and turn the body into a fat burning machine. You
should never reduce more than 1000 calories, as it would most probably screw up your
metabolism.

Protein has 4, carb has 4 and fat has 9 calories per gram.

So if I were to receive 2000 cals in a day, I will use the macro ratio of 20:45:30 to calculate my
macro in gms.

Here’s our website which can do the hard work for you:
www.squats.in/tools

All you have to do is enter the calories and then select the ratio. You can enter ratio manually as well,
in my case I calculated using the above formula. I get the following

125gm carbs, 225gm protein and 67gm of fat.

Now it is tough to find food which has only protein or carb or fat alone. Most of the foods have a
mix of all. In this case you can look at the labels or use Google and a little bit of brain to find out
what combination will give you the above ratio.

My Personal Diet

I know you were waiting for this, so here you go.

I tend to keep things simple. For me the taste doesn’t matter as long am getting the desired results,
some people won’t be able to do that. I urge people to start a diet which they can sustain in long run
rather than copying from here and there for a short period and then giving up eventually after getting
frustrated.

I use eggs as my staple for protein, brown rice and oats for carbs, and nuts and flaxseed for fats.

Keeping the same staple helps you in designing the diet and playing around with it easily for eg; if I
have to reduce my caloric intake instead of eating 100 gms brown rice, I’ll eat 50gms, same for
protein and fat. It gets monotonic but don’t forget you cannot achieve something good sitting in your
comfort zone, you have to make attempts. And from my personal experience, it gets easier with time,
setting a goal of course is very important. In my case it was Hritik Roshan (huge fan!!!) I wanted a
lean shredded body like him. I am not quite there but a tiny winy progress in the same direction😊
Moving on, this is my diet for the entire day. You see the above diet is not perfect and is quite short of 2000 cals.

This is to give you an idea, like I mentioned earlier, the aim is to teach you how to catch the fish. Am sure you can now design a diet plan for yourself.

A lot of people would want to know the reason for high amount of green vegetables in the diet. First they are very less in carbs/calories and give you a feeling of fullness. Second, they provide you high amount of dietary fiber which is required for proper digestion of your protein. So please do not ignore fiber in your diet or it might lead to constipation or dehydration.

<table>
<thead>
<tr>
<th>Food</th>
<th>Calorie</th>
<th>Protein, carbs, fat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Around 10am</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 scoop protein shake (30gm ultimate nutrition Pro-star)</td>
<td>140 cals</td>
<td>Around 25gm protein,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Around 2pm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 whole eggs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 bowl spinach 150gm Mct oil 1 tbspn Fat free curd 100gm</td>
<td>350+80+130+40+=600 cals</td>
<td>Around 30gm protein 15gmcarsbs, 45gms fat</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Around 6pm</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Around 8pm post workout</td>
<td>2 scoops protein</td>
<td>280 cals</td>
</tr>
<tr>
<td>Around 9pm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 bowl spinach 150gm Mct oil 1 tbspn Fat free curd 100gm Brown rice 30gms</td>
<td>80+130+40+150=400 Cals</td>
<td>Around 45gm carsbs, 20gms fat 5gms protein</td>
</tr>
<tr>
<td>Around 10:30pm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>200gms boiled chicken (breast) 6 scrambled eggs</td>
<td>220+102=322 cals</td>
<td>Around 60 gm protein 5 gm fat</td>
</tr>
<tr>
<td>1am sleep</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1742 cals</td>
<td>170gms protein, 85gms carsbs, 70gms fat</td>
</tr>
</tbody>
</table>
You can use the following table to select between your choices of staples.

<table>
<thead>
<tr>
<th>Protein</th>
<th>Carbs</th>
<th>Fats</th>
<th>Fiber</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicken</td>
<td>Green vegetables</td>
<td>Paneer</td>
<td>Vegetables</td>
</tr>
<tr>
<td>Eggs</td>
<td>Fruits</td>
<td>Yogurt</td>
<td>Sprouts</td>
</tr>
<tr>
<td>Fish</td>
<td>Brown rice</td>
<td>Cheese</td>
<td>Fruits</td>
</tr>
<tr>
<td>Whey protein</td>
<td>Legumes</td>
<td>Olive oil</td>
<td></td>
</tr>
<tr>
<td>Tofu</td>
<td>Sprouts</td>
<td>flaxseed</td>
<td></td>
</tr>
<tr>
<td>White mushrooms</td>
<td>banana</td>
<td>Fish oil</td>
<td></td>
</tr>
<tr>
<td>chickpeas</td>
<td>wheat</td>
<td>Nuts</td>
<td></td>
</tr>
<tr>
<td>White potato</td>
<td>Quinoa</td>
<td>Coconut</td>
<td></td>
</tr>
</tbody>
</table>

This is just a reference list (in no particular order) and you can find many more on the internet.

**Zone Diet:** Just change the macro ratio in the above diet and make it 40:30:30 and it becomes your Zone diet for lean muscle gains. You can introduce more carbs like oats, brown rice, sweet potato and so on. It is always a good idea to consume carbs around the workout period. It would be a good practice to have carbs around 2hrs before the workout and not to have any carb source for at least 30-45mins post workout. That way you will have more energy and at the same time when you’re resting you’ll be carb depleted and your body will be burning fat.

**Depletion Diet**

**Warning:** Doing a depletion diet without proper knowledge can lead to severe consequences

You’ve been warned. Depletion diet is no child’s play!

You will need iron will and a rock solid determination to complete two weeks of this diet. I would not suggest extending it beyond that period for multiple reasons including but not limited to hormonal damage, poor metabolism, and regaining weight. So if you do it, do it 100% right or not do it at all.

It’s called a depletion diet because you tend to deplete your body of carbohydrates and sugars and make fat as the only available option in the body compelling it to make the “Switch” thereby allowing body to use fat as its primary fuel.

Once again, am not going to give you a magic formula, the idea is to teach you, to help you understand things so that you can design your own diet.

Now you need to understand a few things straight.

**Your body including your muscle tissues is 70% water!**

Your muscles are not as big as you think. They appear big at any point of time as they are holding a lot of glycogen and water in them. Generally a 100gm of your lean muscle tissue will hold up to 2gm of glycogen,
and each of this 2gm of glycogen will further associate itself with around 3gms of water

So if a bodybuilder has 30kg lean muscle tissue, i.e. 30,000gm of muscle tissue, the muscles will store up to 600gm of glycogen which will further store 600*3= 1800gm of water. That’s 1.8 kg of water. People who start depletion diet often get confused when they see their weight dropping initially. It is this water glycogen weight so even though there is no fat loss you can lose up to 2.5 -5kg of weight at the beginning of the diet depending on your lean muscle tissue and water storage.

Feeling a bit disappointed? Don’t! It’s not a bad thing. You’ll know when you’ll do a contest preparation and how this water and glycogen manipulation can make you stand out in the crowd.

But enough of that. Let’s get started.

So now you know that fat loss is not as easy and to start seeing any results, you’ll have to completely deplete your glycogen levels. And that my friends is the main idea behind any diet, be it Atkins diet, or low carh diet.

What we’ll do is, gradually reduce the carb intake during the first week and then will reduce it further so that our intake is less than 20gm per day, at all times, we’ll be supplementing with enough protein to make sure muscle loss is minimum. And don’t worry if you’re muscles appear flat, it’s because the glycogen and water is going out. They will fill out once you’re back to your normal routine.

Also, the initial few days of carb depletion will be very challenging as your body will struggle to adjust with lower energy supplies. Remember at this point it won’t know that it can use fat as energy source. However once your glycogen levels are completely depleted, you’ll experience, what is called “The Switch” i.e. your body will start using fat and you’ll feel tremendous surge in your energy levels. This should happen typically during the second week. The key is to keep pushing through the first week.

Here’s a sample depletion diet which I use. This is what I personally use, if you compare this with my normal diet (earlier chapters) you’ll notice that I have eliminated all source of carbs here except spinach (for we need dietary fiber at all times and the carbs in vegetables can be ignored).

This is not the best diet I agree neither is it properly balanced, but hey it works for me plus it’s just to give you an idea. Now that you know the concept am sure you can come up with diet which looks better with other vegetables and protein sources in it.
Also to be kept in mind is that fact that you'll have to drink more water than usual, since your muscles will lose glycogen and thus water, you'll continuously need to drink water to keep them hydrated.

**Let's move on to another very important diet.**

**The Ketogenic diet**

**Ketogenic diet or keto** is basically a diet where you'll have absolutely minimum carbs say 20-30gms max. This will force the body to utilize fat as a primary source of fuel thereby aiding fat loss. Remember the car and the fuel example? There are different versions and ways of doing Keto. One that's worth noting is the Atkin's version. In this version of Keto, you basically eat fat to burn fat. This is particularly good for people who want to get shredded and at the same time keep their muscles intact as Keto is muscle sparing. I will discuss the Atkins version of the Keto here in this guide and lay out a sample diet plan as well.

For Atkins, I'd normally use the 5:35:60 macro ratio i.e.5portions of Carbs,35 portions of protein and 60 portions of Fat.

If you know your BMR, you can calculate your macro breakdown from [www.squats.in/tools](http://www.squats.in/tools)

Let's take an example. Say my BMR is around 1500 and my DEE(daily energy expenditure is 2000) my macros for Keto will come to as:

<table>
<thead>
<tr>
<th>Food</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Around10am</strong></td>
<td>During the first week you can have brown rice as a measure of your carbs and you can gradually keep reducing it say 100 gm, then 80, then 60 and soon and during these cond weeks, no brown rice.</td>
</tr>
<tr>
<td>1 scoop protein shake (30gm ultimate nutrition Prostar)</td>
<td></td>
</tr>
<tr>
<td>1 tbsp flaxseed</td>
<td></td>
</tr>
<tr>
<td>4 egg white omelette</td>
<td></td>
</tr>
<tr>
<td><strong>Around2pm</strong></td>
<td></td>
</tr>
<tr>
<td>8 egg white scramble</td>
<td></td>
</tr>
<tr>
<td>1 bowl spinach 200gm</td>
<td></td>
</tr>
<tr>
<td><strong>Around6pm</strong></td>
<td></td>
</tr>
<tr>
<td>4 egg whites</td>
<td></td>
</tr>
<tr>
<td><strong>Around8pm post workout</strong></td>
<td></td>
</tr>
<tr>
<td>2 scoops protein</td>
<td></td>
</tr>
<tr>
<td><strong>Around10pm</strong></td>
<td></td>
</tr>
<tr>
<td>8 scrambled eggs</td>
<td></td>
</tr>
<tr>
<td>1 bowl spinach 200gm</td>
<td></td>
</tr>
<tr>
<td><strong>12am</strong></td>
<td></td>
</tr>
<tr>
<td>1 scoop protein (depends)</td>
<td></td>
</tr>
<tr>
<td><strong>1am</strong></td>
<td></td>
</tr>
<tr>
<td>sleep</td>
<td></td>
</tr>
</tbody>
</table>
25gm of carbs, 200gms of protein, and 122gms of fat

Now let's try and build a sample diet around this. Like I've mentioned earlier, I like to keep things simple and hence I use food that I use daily and is easily available.

For Atkins, following are the best choices for me:

- Paneer (per 100gm – fat 20gm, protein ~20gm, carb 1.5gm)
- Amul cheese (1 slice – fat 5gm, ~protein 4gm, carbs – negligible)
- Extra virgin coconut oil (per 100gm – fat 86gm)
- Flaxseed (per 100gm – fat 42gm, ~protein 18gm, carbs 29gm)
- Spinach (or any other dark green vegetables for fibre)

A sample diet would look something like this:

<table>
<thead>
<tr>
<th>Time</th>
<th>Food Description</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Around 8am</td>
<td>Breakfast 50gm paneer 1 cheese slice 4 egg whites</td>
<td>Paneer (per 100gm – fat 20gm, protein ~20gm, carb 1.5gm)</td>
</tr>
<tr>
<td>Around 11am</td>
<td>50gm paneer 1 cheese slice</td>
<td>Amul cheese (1 slice – fat 5gm, ~protein 4gm, carbs – negligible)</td>
</tr>
<tr>
<td>1 pm lunch</td>
<td>100gm paneer 1 bowl of spinach or any of your favorite vegetable</td>
<td>• Spinach (or any other dark green vegetables for fibre)</td>
</tr>
<tr>
<td>Snacks</td>
<td>paneer cubes sauté in extra virgin coconut oil</td>
<td>Extra virgin coconut oil (per 100gm – fat 86gm)</td>
</tr>
<tr>
<td>Dinner 9pm</td>
<td>100gm paneer 1 bowl of spinach or any of your favorite vegetable</td>
<td></td>
</tr>
</tbody>
</table>

Now this is just an approx. information and the diet will vary from individual to individual, let me remind you again that this information is to help you understand how you make a diet plan and not to give you a readymade plan.

Ketosis within your body will start typically 2-3 days after you start this diet and you will start seeing quick results. You can actually get a urine test done to see if your body is producing more ketones than usual.

Most important thing is that you have to, am stressing on it again, you have to keep off carbs completely. Carbs can completely reverse the effect of this diet.

Also if you lose 1-2 kgs in initial 2-3 days, don’t start jumping, like I mentioned, it would be your
water weight associated with the glycogen that will be depleted. Nonetheless, you can lose up to 4-5kgs in 4 weeks of this diet.

Important- A lot of people say re-fed should be done every week, however from personal client experience, I’ve noticed that body gets smooth and retains a lot of water. It is a good idea to stay on keto for at least 4 weeks continuously before being re-fed.

Also sometimes, people start consuming more protein thinking it will help, however it only works inversely in this case. You see body rather than using stored fat, starts using aminos from this extra protein and converts it into glucose and we know what happens then? No more ketosis. So avoid large protein intake and stick to the ratio. You won’t lose any muscles!

CKD and cheat meals

Cheat meal is the meal where you can have any food that you like. It can be absolutely anything from a full-fledged ice cream sundae to your favorite biryani. Anyone with a body fat percentage below 10% can have a cheat meal after an induction period of approximately 4 weeks of following ketogenic diet strictly. This is done to boost your leptin levels, which is one of the most critical hormones for losing fat. If you are getting results and your weight loss has not stalled, there is no need for a cheat meal and you can just keep playing with your calories, never bring them down to the levels you started with.

Cyclic Ketogenic Diet also popularly known as CKD, should be followed by people who have a bodyfat below 8%. People up to 10% can also follow but they should have a decent amount of muscle mass.

The main principal behind cyclic ketogenic diet is depletion and super compensation of your glycogen stores which I explained earlier and is very critical for your sarcoplasmic growth. Now, even CKD needs to be done only once you’re keto induced. So it is advised to follow a strict ketogenic diet for a period of 3-4 weeks minimum. This induction phase is very important and further determines the success of your CKD. Some people tend to jump directly on CKD without getting properly induced, which is nothing short of a disaster and will lead to fat gains.

So this is how you do CKD:

You get keto induced for a period of 3-4 weeks (make sure you’re around 8% bf) then you move to CKD. You stay on Keto for a period of 5-6 days (depending on your goal), and then load carbs for a period of 24-48 hours depending on your physique, sensitivity towards carbs and a lot of other factors.

A typical CKD cycle for a week would look like this

Monday – keto, Tuesday – keto, Wednesday-keto, Thursday-keto, Friday - keto

Saturday morning, you need to do a depletion workout (high intensity, full body, high rep workout done to make sure your glycogen levels are completely depleted) after which you will start taking a combination of glucose + protein, every 2 hours for the next 8 hours along with some simple carbs. In the subsequent 16 hours, you can take solid meals like rice, chicken, pasta, oats and anything else you want. The amount of carbs that you need to take, depends on your lean body weight. The typical formula is to have around 6-8 gm per kg of your lean body weight, so for a 70kg guy with 10% bf that would come at around 500-600gms of carbs. However, this formula is highly wrong and can often lead to excess carbs. Instead, I’d suggest eating 50gm carbs every 2 hours in the next 16 hours and see how your body reacts.

On Sunday morning, you should look fuller, more defined and more muscular. If you’re holding water, or you’re looking flat, it means either the carbs were too less or they were too many. So it takes a little trial and error to hit the right amount. Again, this you have to figure out on your own with some practice.
On Sunday you can either continue to load carbs, or if you've had too many on Saturday and holding water, then you'd want to do some cardio to burn off the excess calories and you can switch to keto or eat carbs at your maintenance calories.

Some people make use of the period and do cheats as well, which is fine as everything you eat is primarily used by your body to fill up your depleted glycogen stores. So sweets, ice-creams, candies, cookies, biryani etc are all allowed, however make sure your total fat intake on these 1-2 days is less than 15% of your maintenance calories.

Also, make sure your do your depletion workout with maximum intensity, as the only way to super compensate your glycogen levels is by making sure it's completely depleted in first place.

CARB BACKLOADING

It is important to know and understand when you must load carbs in your body. However, this concept of carb backloading works better for the endomorphs rather than ectomorphs or mesomorphs.

The premise for the whole carb backloading theory is that you do need a little carbs, however you need them to fill up your glycogen levels and to some extent promote fat loss.

When we wake up in the morning and eat oats or any carbs for breakfast, we are going to jeopardize our attempts at fat loss. It has to do with how cortisol and insulin when combined have a rather fat storing effect.

For this reason it is advised to have no carbs in the morning. However you can have fats and protein for this meal. So our Meal-1 will consist of fats and protein because they don't raise your insulin levels significantly like carbs do. Neither do they hinder your fat loss attempts. It would be even better to skip the breakfast altogether if your goal is to lose fats.

Now coming to Meal-2

We do not need carbs if for the next 4 hours we are going to lie down on that damn couch, or watch T.V.? Its better to have something which is slowly released and will fuel you slowly. We also need to remember that when we're resting, our body does not burn glycogen, so what happens to the carbs? It will most probably get stored as fats. Meal-2 again is fats+protein.

We can have larger meals for our dinner. Eating our dinner at night time, actually prevents muscle loss and aids in fat loss. There's a research that says that our body releases different hormones during different times of the day (circadian rythym) and that one can actually make use of the pattern and use it to their own advantage.

Insulin is of course one of the most anabolic hormones in the body, and is critical in pushing nutrients inside your muscles as well as filling up your glycogen stores. Many researches suggest that insulin sensitivity is at its peak in the morning. However, this applies to both fat cells as well as muscle cells. So if you eat carbs in the morning, they will be absorbed into both muscles and fats, and we've already read this before that we should not eat carbs for breakfast.

Now after resistance training as well, your insulin sensitivity is at its peak, thanks to the post workout protein shake and leucine in it. However, this time your glycogen stores are a little empty, and when you eat carbs, they are absorbed primarily into your glycogen stores.

It is often said that the eating pattern does not matter. Well, it does. Also carb backloading suggests that it's ok to eat carbs at night and that no, it will not effect your Growth Hormone levels when you sleep. Anyways, it takes some time for your body to get into REM cycle, and by then carbs would have been absorbed into your body. But it is still suggested to keep carbs strictly post workout (after 45-60 mins).
Here is a guide to following the carb backloading:

1. Skip breakfast in the morning if goal is fat loss. If muscle building is your goal, eat protein + fats. (This will also help in fat loss to some extent)
2. Have protein + fats throughout the day. Before workout, you can take MCT oil (adding some l-carnitine and some caffeine would be even better)
3. Have your protein shake post workout, and after 45-60 mins, load carbs
4. For dinner you can eat some more carbs, as keifer suggests, however I'd say stick to salads, fats and protein.

Few Pointers
- Good for endo and people who are carb sensitive
- Aids in muscle building and fat loss at the same time. However, it's not as good at ketogenic diet when your primary goal is fat loss, neither is it as good as a high carb diet for muscle gains. It is simply an attempt to strike the perfect balance
- It is good for staying lean throughout the year, if you're already lean.
- You may want to be more on protein and little less on fats here
- Also varying your carb intake post workout, may help in breaking plateaus

Peak week and contest prep

This is just for your information.

Remember when I said that during initial period of carb depletion, your body only loses water weight? And how it was not a bad thing. Now I'll explain how. See once your muscles are depleted of glycogen and water, they have a tendency to store more glycogen. If during normal state your muscles stored 2gm of glycogen per 100gm of lean muscle tissue, after depletion it can store up to 4gm of glycogen and hence more water. Bodybuilder and athletes take advantage of this situation. Following a depletion diet, they start carb loading, which lets them appear fuller and huge on stage and all the carb will get used up to fill increased glycogen levels. Also a lot of subcutaneous (under the skin) water will be pulled into the muscles giving a dry and ripped look. However this only works for people who are below a body fat% of 10 or less, as it won't make a difference if you have more fat mass.

Not all Carbs are the same- Not all calories are the same

Agreed it's the calories at the end of the day that matters when it comes to weight loss or weight gain, but choosing to ignore the right source because you read some new research or an article by some of the leading names in the industry may actually not be beneficial for your ultimate goals. You'll get results, Will the results be optimal? Far from it. So people professing eating Dal Chawal, mixing carbs and fats, eating sweets because it's within their TDEE. Here's something that might wake you out of your sleep. First things first, not all calories are treated in the same way by the body, for eg. both fructose and glucose yield 4 calories per gm, but they're very different when it comes to being metabolized by
the body. Fats have a different metabolic pathway so does amino acids, and mind you all this is conditional, based on different circumstances, the usage in the body can change.

Secondly, the food we eat can affect some very critical hormones in different ways. For e.g. insulin, I wont even talk about it. We all know when insulin is up, body is in fat storage mode, and frequent insulin spikes in the long run leads to insulin resistance which is also a cause of diabetes and many other diseases. So equal amount of sucrose and equal amount of protein will be same in this case? Please use your brain.

Another example is the ghrelin levels. Ghrelin is your hunger hormone. When it is up, it makes you feel hungry. Different foods have different effects on ghrelin levels, while foods containing fructose or glucose will trigger more ghrelin levels and will make you eat more compared to proteins or fats. One more reason why it's easy to stick to a low carb diet compared to a high carb diet at the same calories.

Different foods can impact your metabolism negatively or positively, be on an ice-cream diet for 1600 calories for a few days and you'll see your metabolism will drop and even at 1600 calories you will find it difficult to lose weight. Try the same with a high protein or a high fat diet and you'll be losing weight pretty sharp. Same calories different results, anyone doubting the results can try it on themselves if they dare.

Moving stored fat in a high insulin environment is extremely difficult even at low calories and when you're in deficit. That's because the hormones that mobilize stored fat (glucocorticoids) simply will not reach optimum levels in a high insulin environment, in fact they won't even be produced in a high insulin environment.

A gram of omega-3 fatty acid will provide the same amount of calories as a gm of omega-6 fatty acids, yet one is good while other is bad for health (read high amount of omega-6 in our existing diets)

So you see a calorie is not just a calorie, and anyone who says that at the end of the day calories are calories and source doesn't matter is either a fool or an attention seeker.

Sources of the calories matter! Be wise, while picking the sources.

**Reverse dieting**

The single most relevant factor that is responsible for a 'no-more' fat loss zone or as we call it a fat loss plateau is the down regulation/slowdown of your metabolism. This is because as you cut down calories, no matter how small the deficit be, metabolism will start to come down. Simply because body will try to preserve energy for survival. In this process our body will reduce the production of metabolism friendly hormones like thyroid, testosterone and leptin to maintain energy balance.

Reverse dieting protocol:

Now you might have this confusion- decreasing calories result in weight loss, so adding up calories will result in weight gain. This is where maintenance calories has to be kept in mind while reverse dieting specifically for weight loss. A slight increase in weight while reverse dieting does not necessarily mean that you are adding fat. That will not happen unless you go beyond your maintenance calories or overlook macro distribution. This slight increase in weight will be intra cellular water retention-muscle glycogen. For example if you are on a calorie deficit diet for weight loss, you start off by preparing a diet chart with calories equaling to your BMR, suppose your BMR = 1600 calories and you are following a low carb diet so you would start with calculating your macros for 1600 calories i.e. 25:45:30 – C/P/F. this would come up to 80gms carbs, 160 gms proteins and 71 gms fat. Now after following a chart with the mentioned macros for a week, you should increase the calories by 100-150 gms (depends upon the week's results) so for the next week you will have to modify your diet chart and make a new chart for 1600 + 100 = 1700 calories, similarly the macros would change to 85gms carbs, 170gms proteins and 75gms fat. Every week we keep increasing the calories by 100-150 based on the improvement and keep repeating the procedure till our fat loss stalls. The stage at which this happens. It indicates that the person has reached his/her maintenance calories and thus they should ideally go back to their BMR value and repeat the whole thing again.
**Dietering Road Map**

Most of the people after reading this would like to start dieting without any clue as to what they will do once it's over. Shall they repeat the dieting or go back to their old habits. That's why I have included this section.

**Detox** - Detox is the process of getting all toxins out of your body, it is a good idea to do a detox before starting any diet so as to get maximum benefits out of it from day-1. You can do a detox for 1-3 days. It's simple, keep your protein intake 1gm per pound of your bodyweight and replace other macros with fruits and vegetables.

**Dietering strategy** – Everyone wants to get muscles, but you have to decide for yourself, do you want to look like a freak show or aesthetic? If the answer is later then you should follow this guideline

- If you can see your abs, you can start with low carb diet initially for 4 weeks and then continue on zone diet for as long as you want
- If you can't see your abs but are already fit, start with Keto for 6 weeks and try to get your body fat below 10% so that you can see your abs ,phase out slowly, change to low carb for another 4-6 weeks till you're shredded enough and then stick to zone diet for as long as you want
- If you're extremely fat, you should 100% do a detox and start with Keto and stick with it for at least 6 weeks, slowly phase out, eat normal food for a week or two but within your allowed calorie intake and then start another session of keto for 6 weeks. You can continue till you achieve your desired weight. However important thing is to keep a gap between dieting periods.
- If you have heart diseases or problems with high cholesterol, Keto would not be an ideal option.

Don’t keep reducing the calories- most people if they don’t get results, keep on reducing calories further and further, this is not good. What you're doing is you're screwing up your metabolism, this is true for most people who tend to lose weight by doing a starvation or crash diet. And they gain the weight back again very soon.

If you do the above mentioned diets correctly, you'd see that your metabolism will only increase and you'll keep losing weight despite higher calorie intake however you should be regularly lifting heavy weights as well

Remember, the more muscles you have, the more fat body will burn, even while resting so focus on building muscles☺️.
Training

If I were to get a dollar every time someone asked whether they should go for heavy weight, less rep so are light weight, more reps, I’d probably be a millionaire. NOT!

But hey, a lot of people did ask me and it’s a genuine question too. Unfortunately there’s no simple answer. I am going to explain how it all works and then may be you can figure out what would work better for you. I’ll also tell you my personal training regime and how it was better than others.

There are a lot of factors that matter when it comes to building muscles ranging from body type to genetics and what not. Different type of sports would require you to have different bodies, however since we’re into muscle building, I’ll only discuss training which will be relevant.

Starting with body type, we have three major classifications:

**Ectomorph** – An ectomorph is a typical skinny guy. Ecto’s have a light build with small joints and lean muscle. Usually ectomorph’s have long thin limbs with stringy muscles. Shoulders tend to be thin with little width.

**Mesomorph** – A mesomorph has a large bone structure, large muscles and a naturally athletic physique. Mesomorphs are the best body type for bodybuilding. They find it quite easy to gain and lose weight. They are naturally strong which is, the perfect platform for building muscle.

**Endomorph** – The endomorph body type is solid and generally soft. Endomorphs gain fat very easily. Endo’s are usually of a shorter build with thick arms and legs. Muscles are strong, especially the upper legs. Endomorphs find they are naturally strong in leg exercises like the squat.

Now don’t be disappointed if you’re an ectomorph or endomorph, I am an endomorph, just saying!

Yeah so endo, ecto blah blah, who cares, where’s my workout routine??

Well old your horses Leonidas, we’re getting there. It’s important to understand a few things before you go there.

Since your primary goal is to build muscles, you need to understand them first. The following chart shows an overview of different types of muscles in the body:
Now the muscles are not all the same size, and may require different types of stimulus to get stronger and developed. You cannot keep doing squats and expect to get a good chest - I know you know this and this is not what am trying to say, what am trying to say is that the weight, the repetitions, the intensity and the form, all these are the factors that play an important part in giving the proper stimulus to any muscle group. So if you were going to ask should I lift heavy weight and do less reps or lift lightweight and do more reps, read what I just said again. There is no single answer and no single size fits all. Different athletes in the history of body building have showed and proved that you can build a great body by following different methods.

Frank Zane(3timeMr.Olympia) use to believe in lifting smaller weights and doing more repetition while more recent bodybuilders like Jay Cutler, Phi Heath and so on are proponents of lifting heavily. The article written below becomes all the more important now, read it to find why.

**Muscle fiber types**

(taken from bodybuilding.com)

Your muscles are made of two different types of fibers. Knowing your personal muscle fiber make-up can be an invaluable aid when it comes to properly targeting your training program. If you’re working your muscles in the wrong way, you’ll be cheating yourself out of hard-earned results.

Every muscle in your body is made up of a bundle of small fibers. In each bundle, you have two main types of fibers: slow twitch and fast twitch

**Slow Twitch:**
These are also known as Type 1 or red muscle fibers. They are responsible for long-duration, low intensity activity such as walking or any other aerobic activity.

**Fast Twitch:**
These are known as Type 2 or white muscle fibers (divided further into A and B). They are responsible for short-duration, high intensity activity. Type 2B fibers are built for explosive, very short-duration activity such as Olympic lifts. Type 2A fibers are designed for short- to- moderate duration, moderate-to-high intensity work, as is seen in most weight training activities.

By looking at elite athletes in different sports, you can see extreme examples of each make-up of muscle fiber. At the slow twitch end is the endurance athlete, such as the marathon runner.

These athletes can have up to 80% or more of slow twitch muscle fibers in their bodies, making them extremely efficient over long distances. At the fast twitch end is the sprinter. World-class sprinters can have up to 80% or more of fast twitch muscle fibers in their bodies, making them extremely fast, strong and powerful but with limited endurance.

**How To Train Your Muscle Fiber Type**

When you’re training with weights, your **goal** is to work as many muscle fibers as possible. Affecting more muscle fibers means greater gains in strength and muscle mass.

If your fibers in a particular muscle consist primarily of slow twitch fibers, in order to affect the
greatest number of those muscle fibers, you’ll need to train that muscle with higher reps, shorter rest periods and higher volume. This is because they take longer to fatigue, they recover quickly and they require more work to maximize growth.

Unfortunately, slow twitch muscle fibers are limited in their potential for growth so even if a muscle group is primarily slow twitch, you should definitely include some lower rep training to maximize the fast twitch fibers you’ve got in that muscle.

If you find you have a hard time gaining size in a particular muscle, it could be because it has a predominance of slow twitch muscle fibers. Higher reps (e.g. 12 to 15 reps), higher volume (more sets) and shorter rest periods (30 seconds to a minute between sets) can help you to maximize those muscles.

This doesn’t mean you should use light weight, though. You should still strive to use weights that are as heavy as possible that will cause you to reach failure in those higher rep ranges. If you don’t use heavy weights, you won’t give your muscles a reason to grow.

If your fibers in a particular muscle group consist primarily of fast twitch muscle fibers, you’re one of the lucky ones. You’ll have a much easier time building mass in that muscle - fast twitch muscle fibers have greater potential for size than slow twitch. The more fast twitch fibers you’ve got, the greater your ultimate muscle size can be. These muscles are most likely your strongest and quickest to develop.

To maximize your muscles with fast twitch fibers, you’ll need to train with low to moderate reps (e.g. 4 to 8 reps), rest period so far around 1 to 2 minutes and a moderate training volume (too much volume will compromise recovery).

If your muscles have a fairly even mix of fibers, you can evenly divide your training between focusing on the lower-rep, fast twitch fiber training and the higher-rep, slow twitch fiber training. This will help you to develop all the fibers in your muscles, maximizing your ultimate development.

**Time under tension or T.U.T**

You’ve read the above article however science says that irrespective of the weights, your muscles develop when they are put under tension for certain duration which crosses your muscles threshold. For eg. You can lift a 20kg dumbbell and do 5-8 reps or you can hold a 10 kg dumbbell facing upwards and hold it for a minute. So which one is difficult? Which one will give you more benefit? The light weight or the heavy? As both the weights will put your bicep muscle under immense tension for a certain duration. Food for thought! Next time someone asks you in the gym to lift the heaviest possible weight, ask them to hold the smallest possible weight against gravity for a certain duration;

Now that you don’t care about lifting heavy or light, let’s move on to some personal tips from my own experience. For me it’s a mix of heavy and light weights. I will do a heavy weight session at 4-6 rep range followed with a lightweight (not as light as you might be thinking;) session at 8-10 rep range or alternate weeks.

- Do more supersets, in which you start by lifting heavy, however end with lifting smaller weights till you can’t do anymore
- Personally, I’d do more inclined chest press as it will build your over all chest
- Volume is the key. Instead of doing 4 sets of 12-15 reps, try doing 6-8 sets of 4-6 reps
- Form is everything, try to retract your shoulder blades, when doing chest press, this will minimize the load on your shoulders and maximize the load on your chest
• Followa1.3approach,1secondtopicktheweight upand3secondstobringitdownslowly
• Do it slow and do it with proper form
• Use dumbbells wherever possible instead of barbells
• Weighted pull-ups is one of the best exercises, do it every day, even if you’re able to do one, do it with strict form
• With back, its mostly pull, so you have to lift heavy enough weights
• Try to avoid exercises which could hurt your neck, Lat pull down behind neck is a big no no
• Use compound movements
• Focus on your negatives and try to hold the weight, feel it
• Do heavy lifting note go lifting
• Don’t train larger muscle group more than once a week, they need more time to recover and hence to grow, like quads
• Don’t overlook calves and hamstrings, you’re going to get lot of negativity if you don’t focus on them especially calves

These are a few things I could remember at the moment, there are many more and I’d try to add them in the upcoming versions

Also since cardio is a big thing among gym goers, let me cover that too

Cardio

Cardiovascular exercises or cardio are basically any exercises that can raise your heart beat. They are important for your overall cardiovascular health i.e your heart and your respiratory system. Cycling, running on treadmill, or cross-fit trainer are a few examples of cardio. Cardio can be done once or multiple times throughout the week, however doing cardio for weight loss is not a suitable option for multiple reasons. Rather change your diet.

Research have shown doing regular cardio can significantly improve your cardiovascular health, however it should not be used for dropping inches off your body. From my personal experience, weight training is the best way to do it. Also fat loss like we discussed is a matter of calories in vs calories out. So revisit your diet.

HIIT Vs steady state cardio- HIIT or high intensity interval training is basically a training split in which your resting periods are smaller. An example would be to run on treadmill for 2 minutes at 15kmph and then takingagapof1minutesandthenrunningagain.HIIT assists in gaining muscles and is shown to increase your metabolism over 24 hours of period. HIIT is fueled by both glycogen and fat and will not target fat immediately. Some researchers have proved however that doing HIIT will help you reduce more overall calories in shorter amount of time then steady state cardio thereby more total fat calories. My opinion??

HIIT is bad ass and does what it claims. However it’s pretty exhaustive!

Steady state cardio–iscardiodesinein70-75%ofyour maximum heart beat range. It taps your fat for energy and is very effective for dropping the last few pounds before a show. However it works only fine for people with already less body fat. You can still do it for overall good cardiovascular health however doesn’t expect magic!

If you’re overweight and you’re running on treadmill, you’re literally wasting your time. Use cardio only for improving your cardio vascular health. For results, weights should be your
choice. You are going to build any muscle while on cardio and do remember the more muscles you have, the more fat you burn even while you’re resting so decide.

If you're looking for a personal training regimen, I’d suggest downloading Bodyspace app, it's a free app from bodybuilding.com and has more than 40000 training programs. I personally follow hivt (high intensity volume training) and it has given me good results so far, also I try to keep my rep range between 6-8.

**MY BEST EXCUSE FOR AVOIDING CARDIO!**

Like everyone, even I, before paying my annual membership fees of the new gym I wanted to join, checked out their equipment for cardio. 8 treadmills, 6 bicycles and 6 cross trainers (or elliptical, whatever). I felt like I had found the perfect gym. Paid my annual fees and from the next day itself, I started with 40mins of cardio utilizing all three of the different equipment for cardio and after that proceeded for 45mins more of weight training, coz “big biceps are more important”. A month passed, and I had lost around 3kgs and I was so relieved. Moreover, those figures on the equipment that displayed ‘calories burnt’ felt like they were the right estimates and they may even have been right. But when I looked at myself in the mirror, there were no ‘cuts’ or ‘blown up biceps’. It felt like the obese aunty in the cardio room (who used the bicycle while talking on the phone) had the same progress as I had. This nonsense started getting to me now and then so I started reading more and more articles, research papers, joined all the bodybuilding groups and asked people for their advices who had gone through the same situation. Diet was the obvious answer to all my queries but that is something all the members of SQUATS are aware of by now. So let me emphasize more on what cardio does and does not do, what can be its substitute for improving your cardiovascular health and most importantly, to burn your fats.

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**WHY ISN’T CARDIO THE FIRST OPTION FOR FAT LOSS?**

The basic idea behind doing cardio for losing fats of an average Joe is, you burn more calories and hence your total caloric expenditure is more than your caloric intake and this isn’t wrong by any means. But do we know from where our body is making arrangements for these calories needed? Yeah, some fats are burned here, but after a short while your body starts breaking muscles for converting them into glucose which will be used as energy by the body. There was a study done where subjects were examined for 4 months where one group did low intensity cardio while the other did high intensity cardio for 4 months and it was concluded that there was a significant loss of muscle mass in the subjects that did the low intensity cardio whereas, surprisingly, there was a slight increase in the muscle mass in the subjects doing high intensity cardio.

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Now this muscle loss will further bring down your metabolism because muscles eat up energy and since you are burning your muscles, less energy will be expended.

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Why does this happen? Because the cortisol levels increase in your body when you perform low intensity cardio. Cortisol is a stress hormone which causes the muscle breakdown in such circumstances. [Low intensity cardio is where you jog at a moderate to low speeds for a prolonged duration]
WHAT IS THE ALTERNATIVE TO CARDIO THEN, HUH?
Strength training and HIIT is your answer!
Let’s talk about how it works better.
Now, when you’re doing a low intensity cardio, you start breathing faster because you need more energy and your body derives this energy by sending oxygen to your muscles causing the muscles to break down into glucose and then providing you with the energy. But when you’re doing HIIT or strength training, your body needs the energy faster. It simply cannot wait for the oxygen anymore. Here the body causes the increase in the levels of lactate. The glucose is broken down into pyruvate which is converted into lactate and this is sent to the liver to be again converted into glucose to be used as energy. [Glucose > pyruvate > lactate > glucose = energy].

But hey! Glucose is again used here like it was used in Low Intensity Cardio so how are we sparing the muscles here? The thing is, unlike in LISS, here not only will your cortisol levels be elevated but even your Growth Hormone and Testosterone levels go up. And in this environment, your body will burn fats and not the muscles!

One more advantage in HIIT is that, as the lactate levels go up, the capacity of your muscles to go on for some more time comes down. There is an upper limit for the presence of lactate too. In HIIT, we go above that limit when we are running at the highest pace. But even as we stop or start walking suddenly, the brain is under the impression that the lactate levels are over the top and so in effect to this, the ability of our muscles to go on comes down. Now this prevents us from overtraining too which otherwise would cause breakdown of the muscles.

The environment in your body is different in LISS and HIIT. For eg., Lets relate this action of ‘running’ to rain. When it rains in a drought prone area like Rajasthan, it’s a boon, whereas if it rains in places where floods are common like in Assam, it’s not that great, is it? Exactly the same is the case here. When you ‘run’, cortisol levels go up, but when its done HIIT style, its like rain in Rajasthan; the situation is ideal as testosterone and growth hormone levels are high too resulting in just the fat loss. Its not the same in LISS. Its like rain in Assam, where you will save water in the dam similarly here you will burn fats surely, but there will be bigger destruction like loss of some muscle mass.

So how to do HIIT?
In HIIT you run at your highest speed for 30-45 secs (this may vary with person to person) and then stop or walk for a minute or so and repeat. I bet my ass that you cannot do this for half as long as you did low intensity cardio. This is still just an example. You can do HIIT in quite a lot of different ways.
So in conclusion, for a proper fat loss and not just a random “weight loss” you should be looking at the diet primarily, then comes some strength training and then lastly you can look at HIIT cardio. You can also be innovative and turn your strength training into a strength training + HIIT. Losing fats while maintaining muscles should always be a priority guys and not just a simple weight loss where majority of your weight loss has been contributed by muscle loss.

[LISS = Low Intensity Steady State ; HIIT = High Intensity Interval Training ]
3 Supplementation
Supplementation

There are n number of supplements available in the market these days let it be L-Carnitine, HMB, CLA, NO products and so on and if you start buying them all, you’ll probably have no money left in your pocket. See these products work, they have years of solid research backing up their claims, but who has the money right? Remember what I said in the beginning? We’re middle class people and our budgets are tight so we have to manage with what we have. So instead of getting into all these high end products, I’ll cover the most basic and most essential supplements.

Protein

Not going to discuss this! You need this no matter how good your diet is, don’t fall for expensive isolates though, blends are good too.

Creatine

When lifting heavy weights, your body primarily uses ATP and CP (Creatine phosphate) stores, however these are very limited you cannot push any further until body makes more ATP from glycogen again. Also most of this ATP, actually exists in the body in the form of ADP (adenosine di-phosphate). When Creatine monohydrate is introduced in the body, it binds to the phosphorus inside the body and exists as Creatine phosphate. Now this Creatine phosphate during heavy workouts gives its phosphate to ADP to form ATP, this happens much faster than glycogen to ATP conversion thereby there’s a notable increase in your strength. Creatine is one of the best legal product available in the market and should be used by anyone who lifts weight at the gym.

Now there’s a common myth among bodybuilding community, that Creatine retains water. So let’s address that. First of all what do you mean by water retention? The water is stored in your muscle cells as well as outside of your muscle cells under the skin. This extracellular water stored under the skin is called water retention. It’s a defense mechanism employed by the body to keep you hydrated all the time.

Now Creatine draws water directly into the muscles and not into the extracellular skin, which is a good thing. Tell them to the experts and they’ll be rolling their eyes now. Most of the times these people stop drinking water all together, stop eating sodium as well. Now sodium is one major electrolyte that helps in regulation of water in the body. So when body detects low levels of sodium and water, the hormone aldosterone is triggered, which further as a part of body’s defense mechanism tries to hang onto the water, thereby causing water retention intracellular as well as extracellular. And people thought it was due to Creatine.

L-Glutamine

Commonly referred to as glutamine is one of the most abundant amino acid in the body. Glutamine can be found inside muscle tissues, and nearly all dairy and meat. Although its produced abundantly in the body, it’s not enough for superior athletes. It’s important
as it’s involved in protein synthesis and recovery. But that’s just not it, there’s far more to it than that. Glutamine significantly affects BCAA metabolism, gut barrier maintenance, normal immune function, glucose formation, water transport, neurotransmission, thereby making it a little more important. It also shortens your recovery period and may reduce soreness (DOMS- delayed onset muscle soreness) as well.

**BCAA**

BCAA or branched chain amino acids are basically essential Amino acids which are synthesized in the body namely Lucien, Isoleucine and Valine along with many other amino acids. However what makes these BCAA’s more important is the role they play. See these amino acids are being used by the body for energy when you’re lifting heavy weights. And if body starts making these amino acids it will not manufacture other amino acids at the same speed. And we know that all the amino acids are required for building proteins which are nothing but chains of amino acids. So it is always a good idea to supplement these essential amino acids, thereby giving body enough time to make all other amino acids, further leading to more muscle protein synthesis.

**Micronutrients**

You may not realize this but if your diet doesn’t have chromium in it, you will suffer poor metabolism. How? Let me explain, even though chromium is required in micrograms, it is an essential cofactor for proper functioning of your hormone insulin. And you know how important insulin is. Anyways it was just an example showing how important these micronutrients in your body can be. There are a total of more than 26 such vitamins and minerals that are required for optimum health by your body every day. Unfortunately there is no single food that will provide you the full spectrum, hence supplementation becomes all the more essential. Multivitamins and minerals tabs can do that for you. Having a balanced diet can take care of most of the micronutrients however supplementation of the following is always beneficial and is even recommended

Vitamin C, any good liver tonic or tabs for optimum liver health, Calcium, Vitamin –B (thiamin, riboflavin, niacin, and so on), Glucosamine Sulphate and glucosamine chondroitin (for joints)

So finally your supplementation stack should look something like this:

- Protein (breakfast, pre and post workout)
- Glutamine (pre or post workout)
- Creatine(pre or post workout)
- BCAA (intra-workout)
- Multivitamin (after breakfast)
- Calcium (after breakfast)
- GlucosamineS+C(after breakfast)
- Vitamin –b, Becosules (after breakfast)
- Liv52, Himalaya(after workout)

Don’t forget fish oil capsules or flaxseed oil for omega-3 and omega-6 fatty acids.
Remember they are required by your brain. Oh and Fenugreek extracts or “Methi extracts” are natural test boosters. So it wouldn't hurt adding some methi seeds in your daily diet. Similarly, garlic is very beneficial herbs that help fat loss as well as reducing free radicals in the body. It work as natural antioxidant. If you can afford, you can use:

- **L-Carnitine** for increased fat loss –
  
  L-carnitine is basically an endogenous compound, meaning its already found in our body. Our muscles have carnitine stores. Meat and dairy products are a good source of this compound. What basically carnitine does is, it mobilizes your fatty acid chains (fats basically) to mitochondria of your cell. Mitochondria is the powerhouse of our cell. It utilizes these fats for the production of ATP. ATP as we know is what we spend to do any work. So what if it uses fats?
  
  We know the primary source of energy for our body is glucose. Glucose also aids in the production of ATP. Our muscles have glycogen stores that starts to deplete when we are training. So now since we have supplemented with L-carnitine, it takes fats for utilization to mitochondria. These fats are now the raw material for ATP production. Consider glycogen as your reserve fuel. So fatigue sets in late which means you can train more efficiently compared to how you have been doing.

  If body has muscle carnitine stores already, then why to supplement externally? Its because the muscle carnitine stores deplete to 50% of its initial value with a 10 min high intensity workout. So to sustain your carnitine levels, it's a good idea to supplement externally.

- **ZMA**--for overall good health and deep sleep
  
  ZMA or Zinc Magnesium Aspartate is a mineral supplement that is a combination of Zinc Monomethionine Aspartate, Magnesium Aspartate and Vitamin B6. The reason ZMA has become popular amongst athletes and people who resistance train is because it supplements mainly with zinc and magnesium which is studied to be deficient in people who train.

  Zinc is studied to be vital for the activity of more than 300 enzymes. Zinc containing enzymes aid in macronutrient metabolism and cell replication, which as we know are key biochemical functions that corresponds to recovery and growth. Zinc has shown to have positive effects on anabolic hormone profile, particularly testosterone. It increases free serum testosterone levels which is particularly important in older men as their testosterone levels start to decline with age.

  Magnesium: Magnesium plays an important role in cellular reactions. Numerous metabolic reactions, over 300 as per researches, demand the presence of magnesium as a cofactor. These reactions include glycolysis, fat and protein metabolism, ATP synthesis etc. A study shows that 14days of magnesium supplementation decreased cortisol which inturn reduced catabolism during training.

  Why to supplement with ZMA?
  
  It is really not necessary if you have ample intake of these minerals from your diet. But if not, you might want to consider its use. Lower levels of zinc and magnesium are either due to sweating while training where you lose a lot of minerals and electrolytes or due to poor diet.

  How zma improves sleep- studies show that people suffering from mild to moderate insomnia seem to improve with oral magnesium therapy. Long term sleep deprivation causes magnesium deficiency and improving the magnesium intake can help with sleep. ZMA improves REM (rapid eye movement) cycles of the sleep. The better your sleep, more you recover and assimilate nutrients

  The list goes on, I’d suggest stick with the basics. Try to explore more herbs and checkout
their benefits, a fish oil capsule will cost you more but flaxseed you can get for 140rs/kg in the market. Read more, use logic and question everything that’s happening. That’s the only way you’ll benefit your body as well as people around you.

I hope this small piece of booklet gave you enough information to start with. Feel free to share this booklet among your friends and family as well.

Remember, Fitness is your right, but you have to earn it!

Cheers ! JC

Find this information too overwhelming? Wish you had a turn-key solution instead? Head out to www.squats.in and hire a personal trainer today.