



# DIET & SUPPLEMENT GUIDE

DIABETIC  
*STARTED*

**IN ORDER TO TRAIN HARD, BUILD MUSCLE  
AND SHRED FAT YOU NEED TO CONSUME  
THE RIGHT AMOUNT AND TYPE OF FUEL.**

Food and drink provide energy to the body in the form of calories. Calorie intake and expenditure are paramount factors to consider when it comes to shredding fat and building muscle.

The right amount of food to eat falls between two extremes of a spectrum.

Eat too many calories, you'll gain weight and jeopardise your health.

Eat too few calories you'll increase the risk of hypos, nutrient deficiencies, tire quicker, lose valuable muscle tissue and burn yourself out mentally.

The goal of Diabetic Shred is to get you lean by eating an appropriate level of calories that support health, training performance, muscle recovery and body composition.

But, how do you go about this?



In order to build a successful diet, you need to take into account a number of key factors, most importantly the total amount of calories and also the source of calories.

Calories come in a number of different forms. These are known as macronutrients, particularly protein, carbohydrate, fat, fibre and alcohol and can be sourced from various foods. Protein and fat are essential for human health, whereas carbs, alcohol and fibre are not.

To put your calories and macronutrients to good use, there are 5 key steps you must follow for building a successful diet that shreds fat and supports lean muscle tissue growth.

### **Step 1: Establish how many calories you need to maintain your bodyweight.**

There are a host of calorie equations available to estimate caloric needs of an individual. While none of them are specific to people with diabetes, they can be used to establish a rough starting point to work from.

To keep things ultra-simple **13-16 kcal per lb. of bodyweight** is a decent starting point for maintenance.

**Highly Active:** 16 kcal/lb.

**Moderately Active:** 15 kcal/lb.

**Non-Active:** 13 kcal/lb.

Yes, there are other equations, but they can get pretty complicated. When you look at the data, the difference usually isn't much more than a couple hundred calories.

The exact calorie intake you need to follow will vary based on real-life feedback and changes in body weight.

Any value you obtain from a calorie equation is a rough estimate.

## **Step 2: Create a deficit.**

Once you get your maintenance calorie intake, you need to cut it further to create a deficit.

***How much do I need to cut?***

Generally speaking, 20% is an acceptable amount of calories to cut. Once you've done this, trial run the calorie intake for 14 days.

Is 20% really enough calories to cut?

Yes, it's a good start. Take into account you'll be starting off with:

- X5 Strength training sessions per week
- 10,000 steps per day

Both of these activities will also generate a deficit. Creating a greater deficit this early is completely unnecessary. How much fat you will lose over the first two weeks is highly individual: you may lose nothing; you might lose 4lbs. You'll use the first two weeks to assess your rate of fat loss in relation to the set calories, exercise and activity.

***As a general rule of thumb you are aiming to lose 1-4lbs the first week then 0.25-0.5kg per week after that. Weight loss will be greatest at the start of the shred as your body loses water and adapts to the lower energy intake.***

Depending on how you go, further deficits can be achieved by increasing your physical activity, eating less or a combination of both. **Successful fat loss is a result of slow tactful calorie deficits made over time.**

## **Step 3: Establish Macronutrient Intake.**

I've concisely summarized the foods, functions and dose for every macronutrient below in order of importance.

After setting your calories, you need to work out how many macronutrients to consume. You can do this in the following order.

### **3.1 Establish Protein Intake**

#### **Functions**

- Muscle growth and recovery.
- Appetite regulation.
- Hormone and enzyme production.
- Transport.
- Immune function.

## Dose

- If you suffer from kidney issues, you may need to consume less protein. It is advised you consult with your medical professional before consuming a higher protein intake than you are now. *I talk about this subject in serious detail in The Diabetic Muscle and Fitness Guide.*
- Set protein at (1.8-2.2g/Kg) or (0.8-1.0g/lb.) Bodyweight.
- The leaner the individual the larger the calorie deficit.
- To maximize the anabolic response of protein, consume the required intake over 4 meals<sup>1</sup>.
- Feedings after training should be (0.4g/Kg) or 0.22g/lbs) Body weight<sup>2</sup>.
- If you like carbs or fats more, consume the lower end of the protein intake scale to provide calorie 'room' for the others.

- If you suffer from kidney issues you may need to consume less protein. It is advised you consult with your medical professional before setting your protein intake.

## Sources

- Animal sources are superior to vegetable sources<sup>3</sup>.
- If you are vegetarian a combination of legumes, vegetables, soy and meat alternatives like Quorn are suitable.
- Vegan strength trainers may be worthwhile supplementing with leucine to enhance the anabolic response of their protein feeds<sup>6</sup>.

PRIME SOURCES OF PROTEIN		
No Legs	Two Legs	Four Legs
<ul style="list-style-type: none"> <li>✓ Salmon</li> <li>✓ Other fish</li> <li>✓ Eggs</li> <li>✓ Dairy products</li> <li>✓ Protein powder</li> <li>✓ Vegetarian, Soy etc.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Chicken</li> <li>✓ Turkey</li> <li>✓ Game</li> <li>✓ Exotic meats</li> </ul>	<ul style="list-style-type: none"> <li>✓ Beef</li> <li>✓ Pork</li> <li>✓ Lamb</li> <li>✓ Other dark meats</li> </ul>



## 3.2 Establish Fat Intake.

### Functions

- Source of energy (9 kcal/g)
- Involved in proper absorption, transportation and function of the fat-soluble vitamins A, D, E, and K.
- Production of cellular components, steroid hormones and other compounds that are essential to the proper functioning of the body.
- Insulation and cushioning (protection)

Fat is one of those macronutrients that has been bullied for a long time. The reality is certain aspects of dietary fat can be harmful to human health, while others are essential for life.

The subject of dietary fat is vast. I'm not going to give you a complete biochemistry lesson on the subject, that is well beyond the scope of this short guide and will only hold you back from getting to the gym. If you really want to learn all there is to know about dietary fat, cholesterol, fatty acid metabolism and the likes, then flick open the nutrition chapter in The Diabetic Muscle and Fitness Guide and knock yourself out.

## Functions

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- Involved in proper absorption, transportation and function of the fat-soluble vitamins A, D, E, and K.
- Production of cellular components, steroid hormones and other compounds that are essential to the proper functioning of the body
- Insulation and cushioning (protection)

Dietary fats are essential for metabolism and good health. They also play a role in training intensity, recovery, injury prevention, muscle accretion and fat loss.

### ***What are the major types of fat?***

There are three major types of fats in the human diet: saturated, unsaturated and trans fats. There are also other substances like cholesterol which are classed under an organic group of compounds called 'lipids.'

While the human body can manufacture most of the fats it needs from other fats, carbohydrates and protein, including cholesterol, saturated fatty acids and unsaturated fatty acids, there are two groups of fatty acids, called essential fatty acids, based on linoleic acid

(omega 6 group - which includes GLA) and alpha-linolenic acid (omega 3 group which includes EPA and DHA), which cannot be manufactured in the body. These are known as the essential fatty acids (EFAs).

Generally speaking, Omega 6 is never really an issue as it is found in nuts, seeds, eggs, oils, and most processed foods, whereas Omega 3 can be more of a challenge to consume, as the best source of it is oily fish, which can be an acquired taste.

Once a minimum intake of essential fat has been met, it becomes far less important than protein and carbohydrate.

Fat doesn't provide the primary source of fuel for hard weight training sessions, nor does it directly support recovery by increasing protein synthesis or restoring muscle glycogen stores.

In saying that, dietary fat intake can be manipulated to a great extent, provided the EFAs are met. Currently, there are no recommendations on dietary fat intake for people living with diabetes who exercise regularly. Considering the essential role EFAs play in human health, it's important not to fall short with their intake.

## ***What proportions of dietary fat do I need to consume?***

The 2015-2020 Dietary Guidelines for Americans offers the following recommendations about dietary fat:

- Avoid trans-fat
- Replace saturated fat with healthier monounsaturated and polyunsaturated fats
- Dietary cholesterol is no longer a nutrient of concern.

It's advisable to consume the bulk of your dietary fat from non-processed food sources. Processed food products can be incredibly tasty, but they don't fill you up. This makes them easier to overeat, resulting in excess energy intake and the addition of unwanted body fat.

Ideally, the bulk of your dietary fat should come from monounsaturated sources. Limit saturated fat to less than 10% of your total daily calories and divide the rest between polyunsaturated fats, ideally with zero 0% coming from man-made trans fatty acids.

## ***How much should I eat?***

The U.S. Department of Health and Human Services Dietary Guidelines Advisory Committee recently announced there is no longer a recommended upper limit for total fat intake <sup>7</sup>, which means no more freaking out about the total fat content of your food.

This doesn't mean you can eat as much fat as you want. Excess calories, no matter where they're from will still be stored as body fat.

Generally speaking, 20-30% of your total calories should come from fat. Generally speaking, around 0.7-1g/Kg - 0.3-0.5g/lb bodyweight is a good target.

- If you like fatty-based food, consume the higher scale.
- If you like more carbohydrate-rich food, eat the lower end of the fat scale.
- *Focus on food choice as a whole rather than merely the fat content.*



## Sources

- ✓ Olive Oil
- ✓ Canola Oil
- ✓ Coconut Oil
- ✓ Natural Peanut Butter
- ✓ Other minimally processed nut butters
- ✓ Real Butter
- ✓ Avocados
- ✓ Almonds
- ✓ Macadamia Nuts
- ✓ Cashews
- ✓ Pecans
- ✓ Pumpkin Seeds
- ✓ Sunflower Seeds
- ✓ Flaxseed
- ✓ Chia Seeds
- ✓ Fatty Fish (Salmon, Mackerel, Anchovies etc.)
- ✓ Fish Oil
- ✓ Egg Yolks

### 3.3 Establish Carb Intake.

Carbohydrate is the most controversial macronutrient in diabetes nutrition. Glucose, the simplest form of carbohydrate is of greatest importance in diabetes management due to its effect on blood glucose levels and medication needs.

#### Functions

- Provide energy, as they are the body's main source of fuel, needed for physical activity, brain **function** and operation of the organs.
- Common source of micronutrients (trace minerals, vitamins and phytonutrients)
- Digestive health and waste elimination.

**The context of most diabetes nutritional research** is performed in non-physically active individuals who have no interest in gaining muscle mass for performance or aesthetic purposes.

While there is plenty of evidence suggesting that replacement of carbohydrate with fat or, in some cases, protein, is beneficial in both types of diabetes (leading to better glycaemic control, weight loss,

cardiovascular risk markers and reduction in medication), this research doesn't take into account the goal of mass gain.

Individuals must consider the context of the research and headlines before making a decision about how many carbohydrates to include in their diets.

## **Dose**

- Make up the remainder of your calories from carbohydrate.
- Cravings for carb-based food, performance dips, fatigue may signify carb intake is too low.
- Aim for around 30g of fibre from fruit and veg every single day, unless advised by a medical professional to limit intake for certain gastrointestinal issues like IBS.
- If so, consume the lower end range for protein and fat and increase carbohydrate intake accordingly.

## Sources

- ✓ Bread
- ✓ Rice
- ✓ Pasta
- ✓ Cereals
- ✓ Fruit
- ✓ Potatoes, Carrots, Butternut Squash (*starchy variety*)
- ✓ Popcorn
- ✓ Quinoa
- ✓ Cous Cous
- ✓ Whole grain products
- ✓ Dextrose, Cyclic dextrin, Vitargo
- ✓ Non-Diet Sports recovery drinks
- ✓ Confectionary

## **FIBRE**

Fibre is essential for promoting gastrointestinal health and nutrient absorption.

According to the 2015 The Scientific Advisory Committee on Nutrition (SCAN), we should eat at least 30g per day of fibre because this is the minimum amount associated with reduced risk of disease.

Evidence is accumulating on the benefits that the gut microbiome, i.e. the trillions of microbes residing in our guts, play in supporting obesity prevention and healthy weight management through their ability to influence energy balance<sup>9,10</sup>. Certain types of fibre are a great source of fuel for the trillions of bacteria living in our guts.

Eating too much fibre during a gaining phase, can lower appetite and jeopardise calorie intake. Provided the minimum requirements are met, it may be a good idea to monitor fibre intake if you have a poor appetite.



## **Step 4: Consider food choice.**

When it comes to getting leaner and packing on muscle the type of food you select doesn't matter as much as consuming the 'right amount' of calories and macronutrients.

However, this isn't an excuse to cram down junk food.

People with diabetes need to be mindful that junk food can jeopardise blood glucose control more than whole, minimally processed food, due to its high glycaemic nature.

Poor quality food choices like confectionery and processed fast food should be consumed within reason and kept to an absolute minimum in people with diabetes who struggle to grasp sound control of their blood glucose levels.

Contrary, you can eat all the clean foods you want, but if they're outside your calorie allowance you'll gain body fat and slow progress. Also, if you don't look after your blood glucose levels, all your 'clean' food won't be metabolised properly and consequently induce hyperglycaemia, which, as you know, isn't good for health or for the muscle building process.

The majority of your diet should come from minimally processed food: vegetables, fruits, fish, meats, legumes, nuts, wholegrains, rice, oats and dairy. Only exclude particular food groups if you have a clinically diagnosed intolerance.

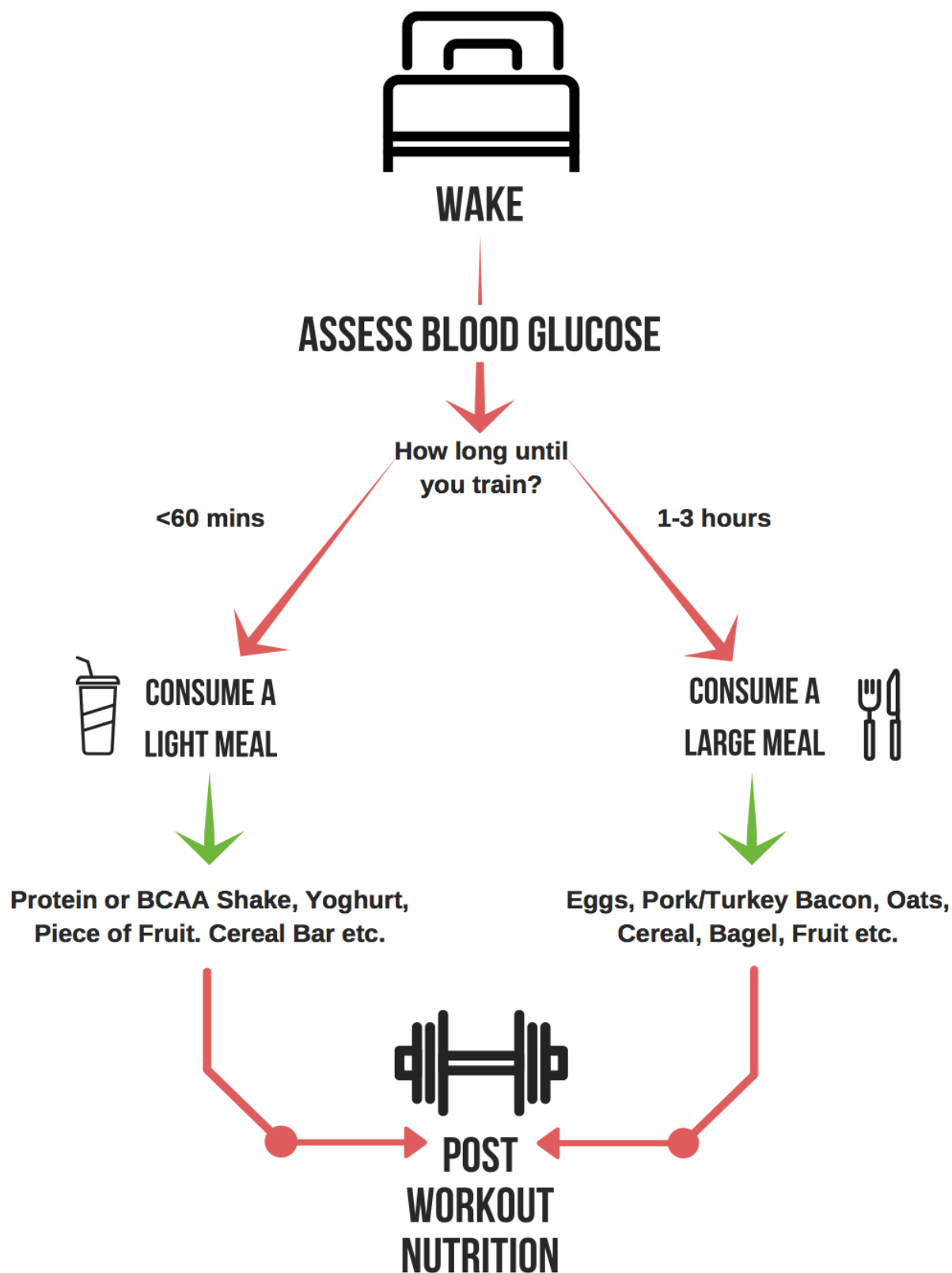
## **Step 5: Meal Timing.**

The timing of your meals is only really important when it comes to controlling blood sugar levels and not optimising body composition.

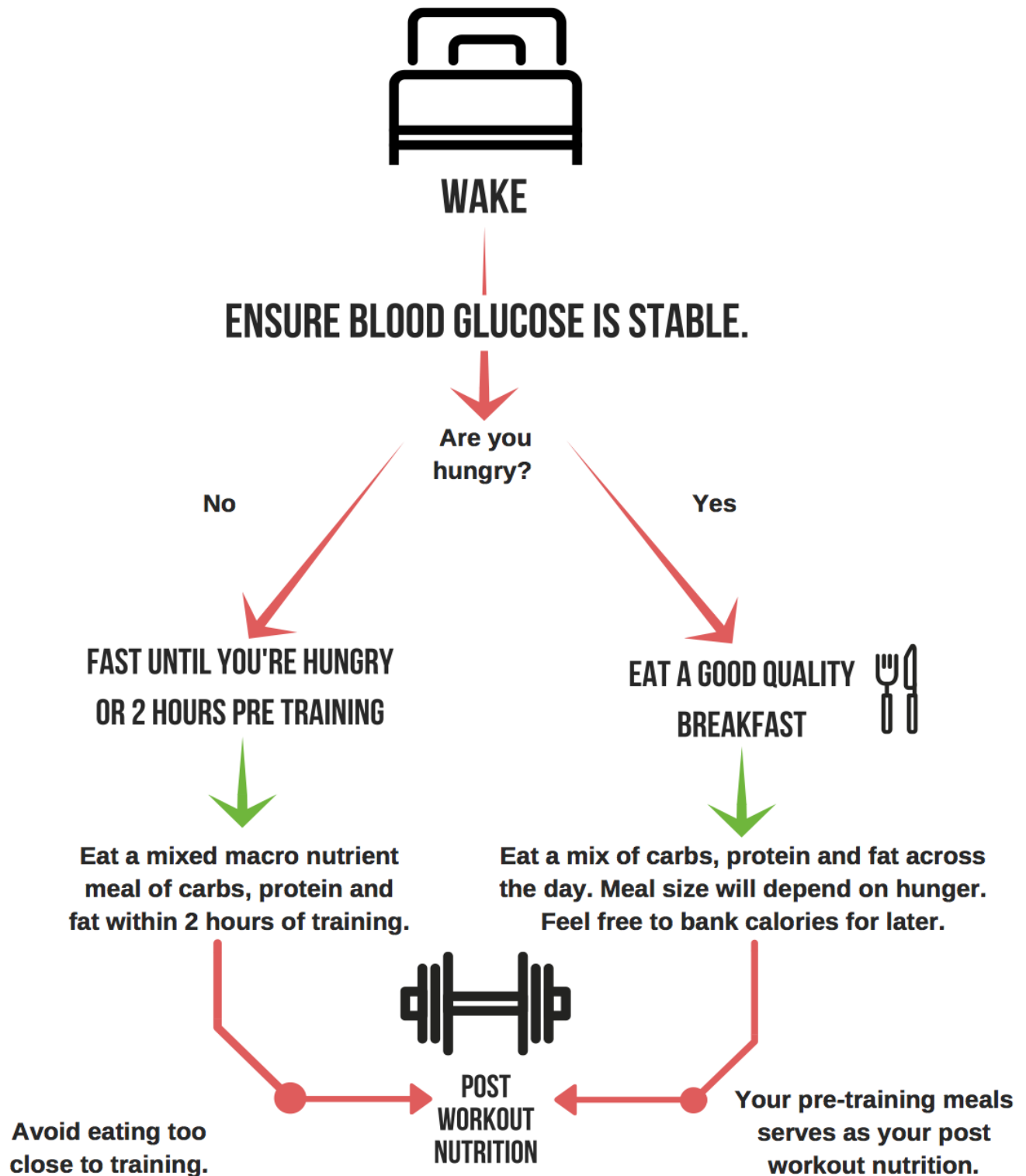
Eat at times that suit you and help keep your blood sugar levels stable.

Check out the infographics on the next page showing two solid examples of how to structure your meals around training.





- Distribute remaining calories across the day over 2-5 feedings.
- Strive to eat in a relaxed state. Suit meals to your life schedule.
- Account for calories used to treat hypos.



- Consume remaining calories post workout over 1-2 meals depending on time of day.
- Strive to eat in a relaxed state. Suit meals to your life schedule.
- Account for calories used to treat hypos.

## SUPPLEMENTS

This section may come as a surprise to you. There aren't that many supplements listed.

The reality is, 95% aren't worth the money.

Supplements are not a magic bullet and should only supplement your underlying diet intake. You do not need to spend a fortune on diet and supplement pills.

I've outlined a concise list of the most effective evidence-based supplements and their respective dosing below. Generally speaking, there isn't any real difference between a mass gain or fat loss supplement stack.

I've kept this section brief and to the point as the subject of health supplements is enormous and way too much to cover in this short guide. The Diabetic Muscle and Fitness Guide has over 15,000 words on the subject. I've extracted the gold for you below.

### **Vitamin D**

1,000-2,000 IU (25–50 mcg) per day is more than adequate.



## **Vitamin K**

A daily dose of 500mcg vitamin K1 (phylloquinone) and Vitamin K2 (MK-7).

## **Fish Oil**

Research shows no harm in supplementing with 1 gram or less of fish oil per day, even in those who eat fish regularly. I don't see the need to consume high doses of fish oil (i.e. >3 g/d) over the long term.

## **Magnesium**

The standard dose for magnesium supplementation is 200-400mg. Pre-Bed is an ideal time due to magnesium's calming effects.

## **Zinc**

A daily dose of 15mg zinc taken on an empty stomach daily. Supplement zinc hours away from supplementing your magnesium. Don't supplement alongside calcium, as they compete for absorption.

## **Creatine Monohydrate**

The supplement everyone gets excited about. First off, it's not a steroid, won't make you go bald nor give you cancer.

People living with T2 can safely consume creatine. Research among people with Type 1 diabetes is lacking and should advocate further studies taking place.

Creatine has demonstrated significant benefits on glucose metabolism when used alongside exercise, raising its potential as a possible nutritional therapy in this population.

For the benefit of your overall care, you must mention it to your medical doctor.

Creatine is a proven supplement, but make sure you're confident in your blood glucose control before using it. Even the best supplements in the world can't protect against hyperglycaemia.

There are two approaches to dosing creatine.

## **Approach 1: Loading Phase**

- 0.3g per kg bodyweight per day
- 80 KG male = 24g (broken up into 5 g doses)

## **Approach 2: Maintenance**

Supplementing with 5g per day.

*Do you need to cycle creatine?*

Given the current body of evidence, you do not need to cycle creatine.

## **WHEY PROTEIN**

Whey protein is simply a convenient source of protein. You can just as easily decide to get a comparable amount of protein from food. It's certainly not needed. When it comes to choosing the 'best' form of protein, choose one with the highest amount of leucine.

It's hard to beat plain old whey protein. Regardless, for most people I don't think worrying about the difference between whey protein concentrate and whey protein isolate is worthwhile.

Whey does not harm the liver or kidneys but may accelerate existing damage if overconsumed.

You can use whey protein if you have diabetes.

Whey proteins (along with a number of other forms of protein) have insulinotropic effects, meaning they have the ability to stimulate insulin, which can lower blood glucose levels in healthy individuals.

**Research in people living with type 1 diabetes** is lacking, but it is fair to say that whey proteins have the capacity to increase blood glucose levels, as insulin secretion is lost, therefore negating the insulinotropic effects of whey.

Be mindful of this and administer the appropriate medication for healthy glycaemic control if you have Type 1 diabetes.

**In people with type 2 diabetes**, adding whey protein to meals, alongside rapid-digesting and absorbed carbohydrates, stimulates insulin release and helps reduce post-meal blood glucose <sup>11</sup>.

## CAFFEINE

Caffeine has been shown time and time again to increase exercise performance. However, it can increase blood glucose levels, jeopardize sleep quality if taken close to bed time, and increase anxiety if consumed to excess.

- **Newbies** - 100mg dose.
- **Regular users (as tolerated)** – 200 – 400mg

Caffeine can be supplemented through popular beverages, like coffee, tea and energy drinks, but it can also be taken in a pill form.



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