



TAILORED NUTRITIONAL MANAGEMENT

# Performance Nutrition Guides

# CROSSFIT

HUW ALFORD

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# CONTENTS

<b>FUNDAMENTALS OF GOOD NUTRITION</b>	<b>2</b>
<b>FUNDAMENTAL FAT LOSS TIPS</b>	<b>3</b>
<b>FUNDAMENTAL MUSCLE/STRENGTH BUILDING TIPS</b>	<b>4</b>
<b>SUPPLEMENTS FOR HEALTH &amp; PERFORMANCE</b>	<b>5</b>
<b>EXAMPLE DAILY FOOD INTAKE</b>	<b>6</b>
<b>WOD/OPEN GYM PREPARATION &amp; RECOVERY</b>	<b>7</b>
<b>COMMON PALEO SHORTCOMINGS</b>	<b>8</b>

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# FUNDAMENTALS OF GOOD NUTRITION

To get the most out of the hard work you put in at your gym you need to be putting the best possible nutrition back in to your body. Therefore any training programme needs to be accompanied by an well thought out nutrition plan – quite simply, if your diet isn't up to scratch then you will be jeopardising your goals, performance and recovery!

There is no “one size fits all” when it comes to nutrition, everybody is different and as such every individual's needs vary. However, this booklet covers the basics of good performance nutrition, laying the foundations that can be build on and tweaked over time in order to produce an individualised plan that will aid optimal performance.

Below are some fundamentals of nutrition that everyone can benefit from no matter what your specific goal. The following pages then cover the more specific requirements for fat loss, strength/muscle gain and supplementing your nutrition.

- Think Paleo (as many crossfitters already do). Fresh, whole, natural foods should be the order of the day...everyday! Think about the item you are about to eat...“did it walk, swim, crawl or grow?” if not then it is not designed to be processed by the body and so avoid it. Furthermore, if you can not pronounce a word on the label then its been made in a laboratory and not by nature, therefore avoid it and give your liver a chance!
- Drink plenty of water. For every kg of bodyweight drink 30ml of water. If exercising then add 1litre more for every hour of exercise. Water is essential for optimal health. When choosing bottled water avoid water in bottles with the numbers 3,6 or 7 in the triangle on the bottom indicating recyclability; this is toxic plastic that can affect hormone balance. Filtered water at home can be the best and most cost effective source but if taking in your own bottle be wary of the plastic from which it is made.
- Adding a small pinch of quality sea salt to filtered water is great way of replenishing electrolytes and minerals in the body. This is more important during physical activity and on warm days. This is not necessary if drinking a good quality mineral water.
- Try to identify intolerances in your diet. Many people can have issues with wheat, gluten, dairy, soy and eggs which can have detrimental effects on the gut and immune system. A lot of the time you will not know if you have an issue until you remove and then reintroduce a food type. A true Paleo diet will negate most of these issues by default.
- Try to get as much quality sleep as possible. Ideal time slot is between 10pm and 6am. Good sleep will aid body repair and keep hormone levels balanced. There are many factors that can affect the quality of your sleep and it is something that will be well worth looking into e.g blackout blinds, removal of light sources, no visual stimulants an hour before bed.
- Follow the 80/20 rule – Nutrition is vital but everybody needs to relax the rules from time to time. If you are eating right for 80% of the time then you body will easily deal with the other 20% without any real effect on body composition. This will also allow you to include the odd ‘free meal’ that can help keep your overall nutrition on track.
- Preparation is key. Prepare meals for the following day the night before. This means you will have some healthy food available when you need it, minimising the chance of you deviating from your nutrition plan.
- Purchase the best quality meat and produce you can afford. Grass fed and free range are best but if not feasible then butchers meat is likely to be better quality than the supermarket. Similar applies for fruit, veg and greens.
- Make sure your training is appropriate for your goals. It is easy to get carried away and lose focus on your goal resulting in wasted time and effort. Be very aware of over training – listen to your body!!!
- Avoid large alcohol binges as much as possible as these will not only result in the inevitable junk food fest the following day but will also act to knock hormone levels out of sync.

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## FUNDAMENTAL FAT LOSS TIPS

Fat loss is about far more than simply creating a calorie deficit. Get your nutrition right and with time and practice you won't ever have to be a calorie counter again! There will be a lot of trial and error required to find your own optimal nutrition regime but it is time well worth investing. With time good nutrition can become instinctive.

- Try to improve your Omega 3:6 ratio – Increase the amount of oily fish, grass fed meat and flaxseed/oil you consume wherever possible. Also make a conscious effort to avoid vegetable oils and processed foods in which they will be hidden. Moving the balance back towards a more favourable ratio helps promote good health and fat loss.
- Avoid nearly all commercial drinks including fruit juices. If it isn't freshly squeezed by you then it is likely to be sugar laden water. Sports drinks are generally unnecessary for most people so stick with water...its cheaper!
- Even squash is full of sugar or, if sugar free, artificial sweeteners that can be detrimental to fat loss.
- Nutrition is key to fat loss. Excess exercise won't necessarily see the fat fall off and in the long term will lead to burnout or injury. Train in moderation and when you do train do so with purpose!
- White flour and white sugar should be avoided wherever possible.
- Many people have an intolerance of milk processed by pasteurization and homogenization. If this is the case and raw/organic whole milk cannot be acquired then goat or sheep dairy can be a better option.
- Avoid grains where possible, especially wheat. It may be very difficult for some to fully remove grains. If this is the case then an effort should be made to minimise consumption as much as possible. For optimal lean body composition the diet will want to contain as little grain content as possible with any carbohydrate focus being on that from vegetables, fruit and starchy vegetables such as potatoes. Some rice varieties, such as basmati and jasmine, can be a good starch source but must be thoroughly washed and soaked prior to cooking to minimise anti-nutrients.
- In terms of carbohydrates, raw or cooked vegetables are best, followed by fruit and then starchy vegetables like potatoes and then rice. If trying to lose fat then avoid fruit outside of the post training window, with the exception of berries, as fructose can be problematic for weight loss.
- You may want to consider using BCAA's during intense physical activities especially if exercising for extended periods of time or in a fasted state. The BCAA's will help protect against the breakdown of muscle whilst on a fat loss plan. Muscle is vital to maintaining high metabolic rate and as such the preservation of what you have is vital.
- Attempt to identify and subsequently remedy possible limiting factors such as intolerances, poor gut health, poor immune system, stress and underlying medical conditions. One or more of these can often be linked! Even with the best nutrition and training program you will be fighting a losing battle.
- Drink caffeinated green tea – it has anti-oxidant and fat burning properties and can also suppress appetite. 2-4 cups a day consumed before 4-5pm is ideal.
- Where possible exercise in a cold environment (easy in this country!) or with minimal clothing – as the body tries to keep your organs warm the calorie expenditure increases by as much as 200-300%.

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## FUNDAMENTAL MUSCLE/STRENGTH BUILDING TIPS

- Eat a good quality protein source as part of every meal and snack.
- EAT! Make sure you are eating enough and what you are eating is of the right calories so that your muscles are sufficiently fed to enable growth to occur. You can either calculate your estimated basal metabolic rate (there are many online calculators available) and then simply add on 500-1000kcal per day (depending on your daily level of activity – office job and labourer will be at different ends of the spectrum), or if you have a good idea of how much to eat to sustain your current weight you can simply try adding an extra meal per day, preferably post workout., or try adding calorie rich whole foods to your regular meals e.g. Nuts, dairy and oils.
- Learn how to effectively cycle your carbohydrates consumption so you can maximise recovery. Correct timing can help to trigger an appropriate and beneficial insulin response post workout whilst maintaining steady levels for the rest of the day which is conducive to good overall health and body composition. The general rule is that carbs are ideally used in the post workout window but everyone will be different. You need to experiment with different carb intakes and monitor the resultant fat gain, adding or reducing intake until you find a suitable level (weight gain should ideally be around 0.5 to 1lb per week with minimum fat gain).
- To maximise your fuel and nutrient intake post workout then utilise a protein shake. A good quality whey powder with some simple carbs is all you will need (no need for fancy expensive formulas!!) e.g. 40g whey isolate mixed with water and 40g dextrose powder.
- Supplements are useful but they should remain as supplements! Real food should always be your priority with supplements being added to fill a small deficit that can't be practicably filled with real food (due to convenience e.g. Post-workout) or to take your performance to the next level once your nutrition and lifestyle is fully 'dialled in'. It can not be emphasised enough that...**You can not out supplement poor diet!!!** My preferred supplements and a real food alternative (for those on strict Paleo) are given overleaf.
- Get lots of sleep! Ensure you get a good 8 hours of good quality sleep every night and if possible fit in a "power nap" post training to increase growth hormone levels, subsequently speeding up recovery and increasing growth. There are many factors that can affect the quality of your sleep and it is something that will be well worth looking into.
- If you find that you are struggling to get the extra calories in and you are good at digesting dairy then try introducing 1-2 litres of whole milk into your daily nutrition. Raw or gold top cows milk or goats milk are the best choices. Good quality hard cheeses are also a good option. Personally, I have often resorted to a double cream and whey shake to boost my intake!
- Train hard and with purpose but avoid overtraining and don't lose track of your goal – if you want to build good levels of muscle then don't go on long runs several times a week!

I personally believe that a true, strict Paleo style diet, although great for promoting overall health and a powerful weight loss tool, is limited when it comes to muscle building and strength gains. Reasonable development can be achieved by those just starting out but these will quickly level off. Continued hypertrophy and strength gain is possible but requires a lot more thinking and planning making it less sustainable for the vast majority. For the athlete wishing to continue making notable gains in muscle growth/strength I believe that some compromises to the strict Paleo diet must be made e.g. Use of some grains like rice, introduction of supplements.

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## SUPPLEMENTS FOR HEALTH & PERFORMANCE

Below is a prioritised list of the supplements that I feel are genuinely worth while investing in but only once the rest of your nutrition is spot on! The real food alternatives for those on a strict Paleo style diet are written in green where applicable:

### FISH OILS

Fish oils are a great source of Omega3 fatty acids. Increasing your Omega3 intake can aid the immune system, regulate blood pressure & maintain a healthy heart, support neural function, help joint operation & combat joint inflammation. They are also a rich source of vitamin D3. Ideally we want to be getting the majority of our Omega-3 intake from whole foods such as oily fish, grass fed meat, flax seeds, organic eggs, walnuts and even green algae. However, this may not be possible all of the time and as such a helping hand may be required in the form of supplements. **Quite simply eat more oily fish. Sardines and Mackerel are the most cost effective with a 100g serving giving around 3-4g of EPA DHA combined, the equivalent to approx 12-16 regular fish oil capsules. If going for the tinned variety then make sure it is in spring water and not sunflower oil.**

### MULTIVITAMIN

Take a good multivitamin just to cover all bases! If you are eating a good and varied diet of fresh whole foods then you should be getting all the micronutrients you need. However, a multivitamin is a cheap and effective way to ensure that you leave no stone unturned in the quest for optimal health and nutrition.

**As stated the multivitamin is only used to cover all bases. If you are eating a good diet of plenty of fresh whole foods then this should not be an issue.**

### WHEY POWDER

Protein powders are probably the most popular supplement in the fitness industry and is often the first one people will try. There is a range of powders available from different sources but the most popular is whey. These powders are usually added to water/milk to make a quick and convenient post-workout shake. This is an easy way to get the required nutrition into the body to aid recovery within the important 2 hour (ish) PWO window, especially if you find it difficult to eat real food directly after training. However, some powders can also be used to give a protein boost to a breakfast smoothie or even used to bake!

**The main reason protein powders are used is that it is a convenient and quick method of getting nutrients into the body to get the recovery process going. If following a strict Paleo diet then this is not really an option so the next best thing would be to consume a natural protein source with a relatively quick digestion time in order to maximise recovery. Eggs and fish offer the quickest digestion time, followed by chicken. Red meats and pork are significantly slower to digest.**

### CREATINE

Creatine is a naturally occurring organic acid that is used by the body to provide phosphagen to the muscles of the body that are used for short and intensive bouts of exercise. Creatine is consumed in small amount through consumption of meats like beef. However, supplementing with creatine increases concentrations in the blood and enables a faster replenishment of energy which, in turn, can improve maximal strength and performance in intensive exercise. On training days it should be taken post workout and on rest days can be taken with the evening meal. An 8g serving is sufficient for most people and there is no need to "load".

**Naturally occurring in red meats, especially beef, but not realistically possible to get anywhere near the concentrations derived from supplements.**

### BCAA'S

BCAAs increase protein synthesis in muscle and have been proven to increase exercise endurance. Taken during training, BCAAs also increase both insulin and growth hormone levels whilst providing energy to the athlete and they also are effective at reducing post workout muscle soreness. BCAAs are required by the body to maintain lean tissue and studies have shown they preserve your stores of glycogen. BCAAs can also help 'switch' the body from a catabolic state to an anabolic state maintaining muscle mass whilst decreasing body fat.

**Red meats contain the highest levels of BCAA's. There is no natural food stuff that can be substituted to provide BCAA's for use in a fasted state.**

### SUPERFOOD DRINKS (GREENS DRINKS)

We are told over and over again to eat our greens. Not only for the benefit of the vitamins and minerals and the fibre to promote a healthy gut but also to help maintain a favourable pH level within our bodies. High protein diets coupled with modern lifestyle, environmental stresses and toxins, often tips our bodies into a more unfavourable acidic state which can be detrimental to health and well being as virus' and bacteria flourish, inflammation occurs and fat is deposited.

Some people will struggle to consume enough fruit and veg every day and so a little help may be required. By introducing a **Greens Powder** to your daily routine you are conveniently taking on board natural organic alkaline promoting ingredients that encourage the body to keep an ideal pH balance.

**If you are following a strict Paleo diet then the likely hood is that you will be getting enough fruit, veg and berries in your diet. However, I believe that a good quality, naturally derived green powder can be included into a Paleo diet as it should just be freeze dried veg, berries and fruit.**

### MAGNESIUM

ZMA is a synergistic combination of Zinc and Magnesium designed to maximize absorption and promote recovery from exercise. Zinc plays a central role in the regulation of cellular growth and tissue repair, as well as the maintenance of a healthy immune system. Magnesium is essential for the maintenance of electrolyte balance, energy production and normal neuro-muscular function. Zinc can aid testosterone production and also aid better sleep.

**Dried herbs, seeds and cocoa are all foods that are particularly high in Magnesium and may help to supplement if needed.**

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## EXAMPLE DAILY FOOD INTAKE

This example of daily food intake is based on the assumption that all training takes place in the evening. If training in the morning then simply swap the snack and lunch for the Post workout shake and dinner (meal containing starchy carbs).

Note: portion size is only representative for a male of average size and build. Individuals should alter portion sizes to suit their need.

### BREAKFAST

Half an onion, 100g of chopped mushrooms and a clove of garlic chopped and gently fried in beef dripping. Once softened add a couple handfuls of spinach leaves. When spinach is wilted add 4 whole eggs and make into a Spanish omelette. Season with salt pepper and preferred herbs and serve with a handful of smoked fish (mackerel/Salmon).

### SNACK

Handful of mixed nuts and some berries.

### LUNCH

Shredded lettuce with chopped cucumber, peppers, onion, tomatoes mixed with two large, diced chicken thighs with 50g of fried smoked lardon cubes. Serve with preferred olive oil based dressing.

### PRE-TRAINING SNACK

Handful of Biltong and a handful of dried berries

### POST TRAINING/WORKOUT

**If not following a strict Paleo diet then a whey protein shake (40g) with around 30-40g simple carbs (large apple of banana or dextrose powder).**

**If on strict Paleo diet then 200g of lean fish and some potato and carrots**

### DINNER

Rump steak and quinoa with sauteed cabbage, broccoli and carrots. Then bowl of chopped mixed fruit and berries.

Notice that any significant amounts of carbs only come in post training. This form of carb backloading will help create and maintain a lean physique whilst enabling recovery and allowing the individual to perform to maximum when next needed.

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## WOD/OPEN GYM PREPARATION & RECOVERY

Many people have their own rituals for preparing for an exercise session in order to train to their maximum. More often or not, it will involve certain foods. If this works for you then fine, but the following is what I believe will get the majority of people suitably fuelled and ready to go!

Firstly you need to stop thinking of your stomach as a fuel tank. Your body's true fuel tank is your muscles and liver and the fuel is glycogen. If you have had eaten properly the day before then your glycogen stores should be full and there is no need to 'carb up' an hour or two or even the morning before a session. An average person will be carrying around 1200-1800kcal worth of glycogen in their body, which will see most people through 90mins of intense exercise.

You do not want to be eating any significant amounts of food within the two hours before an intense session as it will not only effect the digestion but will also have detrimental effects on your training and worst case you will be seeing your last meal again!

I know that many people like to eat sweets and use "energy" drinks before a session. These really do not help, in fact they do the opposite and limit your bodies ability to efficiently utilise energy. Stick with just plain water. If you need to "perk" up before a match then caffeine via coffee (or tabs will help and a little tyrosine will help to focus the mind.

Throughout the session just drink water or an electrolyte mix but nothing with sugar of any form.

A shake after the session is the easiest way to get some good nutrition in but it is not essential for most. The 'post workout window' is up to 3 hours allowing plenty of time to get some real food. If using a shake be mindful that it will help start the recovery but this needs to be followed up with a significant meal. The good news is that after an particularly intense session most of what you eat will be quickly used up to replenish glycogen and repair damage. This means that what you eat will have less effect on your body composition and so you have a **little** more freedom to stuff your face with what you like (within reason!).

I feel it should be emphasised again that **you can not out train poor nutrition!!!** Nutrition is key and should even take a high priority than training itself. You may train 4 or even five times a week but you will be eating 3-5 times a day! If you do not improve your nutrition then you will be effectively wasting much of your efforts in the gym.

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## COMMON PALEO SHORTCOMINGS AND REMEDIES

- Sports and activities that involve periods of highly intense physical exertion such as crossfit place great demands on the body and, if training numerous times a week the athlete will be in some stage of recovery almost continuously. The keys to optimum recovery are sleep and diet. Even though eating a Paleo style diet similar to what our Stone Age ancestors ate is highly beneficial for health and is a powerful fat loss tool, it can be limiting for optimal recovery and performance and as such certain nutritional concessions must be made for the athlete who is training vigorously and at a high volume. Rapid recovery is the biggest issue facing such an athlete. While it's not impossible to recover from such training loads on a strict Paleo Diet, it is somewhat more difficult to recover quickly. Therefore some modification is required post any challenging workout e.g. Use of carbohydrate rich starchy vegetables, gluten free grains and appropriate dairy produce (if it can be tolerated).
- Don't go nuts!!! When thinking 'hunter, gatherer', many people head straight for the nuts and seeds. Although, in theory, these are good choices due to their favourable fatty acid content, today's modern foods are already high in Omega 6 due to modern farming methods. Most peoples Omega 3:6 ratio are already too in favour of Omega 6 so consuming vast amounts of nuts only acts to further push the balance further out of kilter, placing the body into an inflammatory state which is conducive to bad health. To combat this issue simply hold back a bit on the nuts, choose your nuts more wisely (Walnuts and Macadamia have for favourable fatty acid profiles) or increase your consumption of Omega 3 rich foods. Good sources of Omega 3 are oily fish, organic eggs and the fat in meat from grass fed cattle. Flax seed is also high in Omega 3 but it is the fatty acid ALA which is vastly inferior to the animal derived acids EPA and DHA found in the afore mentioned foods. Many people do not like fish and as such the easiest and cost effective way is to supplement with Omega 3 fish oils. Individuals should aim to consume 2-4g (EPA & DHA combined) a day. This equates to around 100g of mackerel or 8-16 standard fish oil tabs.
- Eat your greens!!! Your mother was right! Aim to get as much green leafy veg in your daily intake as possible. Spinach, kale, cabbage, rocket, watercress, asparagus, broccoli, dandelion leaves, sprouts..... Generally the greener the better. The fibre is good for gut health, they contain vital nutrients, are oxidising, alkalising (especially important when eating a high protein diet) and can help boost your immune system via hormesis. I always suggest around half a plate should be devoted to greens and veg. This is a lot and many people come back with 'our ancestors wouldn't have consumed this much!' Correct, they wouldn't have but what they would have eaten would have been considerably more nutrient dense than the mass produced stuff we have today. Some modern veg has been shown to contain as little as 10% the nutrients that its equivalent did in 1940 and it is for this reason we have to bump up the volume.
- Think about fruit! The simple fact is that most of the modern fruit bears little resemblance to its original form. Centuries of genetic modification has given us the equivalent of natures Haribo! Tasty but loaded with sugar. But rather than avoid fruit, use it to your advantage as a PWO snack to get the favourable insulin response and recharge the glycogen to help aid recovery. For the rest of the time stick to berries, the darker the better.

I hope the information in this guide is of help to many people. If you now wish to take your health and performance to the next level then Nutrivitam offers individual tailored nutrition and training packages at the cheapest prices around. Each package is tailored to the individual's specific needs and goals for maximum results whilst being sustainable.

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