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PROTEIN

The First Pillar of Beyond Nutrition's Fundamentals

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During our 15 years of combined experience in the health and fitness industry we've noticed that there seems to be a few key differences between those clients who can sustain their results long term and those that can't.

Underpinning our philosophy and how we think about nutrition can be broken down into the Beyond Nutrition Pyramid. At the base of our pyramid, we believe that if most people just focused on the following three key pillars of health, they would get at least 80% of the way to their goals. That does not mean that we only address the fundamentals. This is just where we start, create a baseline of good habits (walking) before starting to specialise (run). Because if we are to make long term change, once we've finished running, we inherently will need to come back to walking. So why not learn to walk from the start?

By focusing on the fundamentals, this creates a new identity within yourself, it creates a set of systems that will enable you to sustain this change long term. The 3 fundamental areas that we think you should focus on, before starting a more structured diet are; **food quality, protein, & movement.**

This e-book is about protein and over the next couple of pages not only will you learn the basics of protein, but also receive a couple of key recipes to help you incorporate more protein into your diet.

Protein

> *Nutrition is about two tissues: the brain and the skeletal muscle. If those two tissues are healthy you are going to live a pretty good life*
>
> *- Donald Layman.*

When we consider the functionality of muscle, we usually think about strength. But let's take a step back. Strength doesn't only mean what you can lift in the gym. Muscle gives us the strength to move. Healthy muscle gives us our independence.

Muscle is the largest organ in your body and has functions far beyond supporting your physical body. Skeletal muscle is primarily responsible for glucose metabolism, which is critical to reversing insulin resistance and preventing chronic disease like diabetes. Think of this as a dumping site for the carbohydrates you eat. The more muscle you have the larger the dumping site. Muscle is also your store of amino acids, which plays a role in fighting inflammation, and influences how your body and brain work through chemical signalling.

Muscle also plays a role in overall metabolism by being a large contributing factor to your basal metabolic rate (BMR). BMR refers to the amount of energy your body typically burns at rest (muscle needs energy to move). Therefore, the more muscle you have, the higher your metabolic rate (metabolism).

From the time you are born through into your 30's your body is building muscle. At some point during your 30's the body undergoes what is called age-related sarcopenia (age-related muscle loss). This accelerates the older we get but can account for a loss of 3-5% per decade. Both exercise and nutrition play a vital role in your ability to ensure you slow down this age-related decline and shift your body to accruing new muscle tissue to remain healthy.

Whether your goal is weight loss, to gain muscle, improving health outcomes, or longevity, taking a muscle centric approach is vital and the nutrient primarily responsible for supporting a muscle centric approach is protein.

What is protein?

Protein is one of the 4 macronutrients (foods that provide us with energy) and is built up of differing amino acids (think of protein as a completed piece of lego. The individual lego blocks are the amino acids). These amino acids have a downstream effect on all the processes your body undergoes.

There are 20 amino acids, 9 of which we need to obtain from the diet (because your body can't produce these on its own). The food we eat contains a range of these amino acids in differing quantities. By focusing on the quantity and quality of your protein intake, this will ensure you meet your requirement for these amino acids.

> *"Protein is like a vitamin pill. We don't have a daily requirement for a vitamin pill, we have a requirement for 12 vitamins within the pill. Same can be said for protein. We don't have a daily requirement for protein, we have a daily requirement for 9 essential amino acids."*
>
> *- Donald Layman on the Peter Attia Drive podcast.*

Food is code:
If you've been following the fitness space, I'm sure you've had "calories" or "energy balance" thrown at you a number of times. Food, and protein in particular is more than calories. Food is code that interacts with our body and sends signals to start and stop different processes. Proteins and specifically individual amino acids have a metabolic role and each one is linked to a cascade of downstream effects.

Protein is not just protein and how we've been told to think about protein is all wrong. To simplify things we are told to consume more protein. Here's your daily requirement, achieve this any way you can. At the muscle level to stimulate muscle protein synthesis (the process by which you build new muscle) you need a minimum of 25g of protein (ever wonder why your protein shakes are dosed at 25g. Note - this minimum number does increase based on your training status and weight). That is because, in most foods 25-30g of protein is required to achieve the threshold for the limiting 3 amino acids.

Protein Quality: The Limiting 3

Leucine:
Leucine is the main amino acid that drives muscle protein synthesis. Without sufficient leucine, the light switch to turn on the process of building new muscle never gets hit. Leucine also helps insulin signaling (hormone responsible for moving carbohydrate from your blood into muscle) as well as increases your ability to burn fatty acids. We need 3-5g per day but if our goal is to build and stimulate muscle then we will likely need more (6-9g).

Lysine:
Lysine is another amino acid responsible for muscle protein synthesis. It's the backbone (quite literally the Lego piece at the spine) of carnitine (some of you might be familiar with this as an over the counter fat burning supplement), which is responsible for burning fat as a fuel. Interestingly, oral supplemental carnitine doesn't quite work the same as carnitine in the body. You'd be better off ensuring your diet contains adequate protein (and Lysine) rather than supplementing carnitine from a fat burning effect. Lysine is limited in grain products so if you are using these to achieve your protein intake, you likely will be falling short on this amino acid.

Methionine:
Methionine is an amino acid that will singularly limit protein synthesis as it directly relates to transcription (copying) your DNA. Without enough, protein synthesis won't start. It's responsible for making creatine in your body (that other supplement most you will likely be aware of) and is a precursor to Glutathione, an antioxidant which helps your immunity. It's limited in legumes but high in Brazil nuts, beef, & eggs.

The quality of protein is then referred to by the amount of these limiting amino acids that different foods contain. We can see that if you have a diet that is high in animal protein, then the "quality" will be taken care of. If however, you consume a plant-based diet then being more aware of both the types and combinations of your protein will be important to ensure protein quality remains high. Combining foods like grains and legumes or including dairy/egg/protein supplement products where possible will be helpful in ensuring you still get an adequate balance of the limiting amino acids.

Protein Quantity:

Ok, so now that you know the types of protein that you should be consuming, let's look at how much.

A few of you reading are probably well aware of how much protein one would need per day. The general reference for anyone resistance training (which you should be) would be in the range of 1.8-2.5g per kg of bodyweight. Therefore an 80kg person would need anywhere between 145-200g of protein per day.

As a general rule, this is a great starting point but as we've discussed above, to optimise protein for your muscle, we need to take this a little step further. Depending on your goals, we recommend splitting your total daily protein target into two to four serves of at least 30g. Therefore, based on our 80kg example above, it would be better to achieve that protein target in three servings of 50-60g servings rather than 10 small servings (think snacking or grazing) of 15-20g.

Anything less than 30g will likely be used towards energy purposes as opposed to being used as a signal to turn on the muscle building switch.

How do we get 30g protein:

- 135g chicken
- 150g beef
- 180g white fish
- 170g prawns
- 5 whole eggs
- 375g natural yoghurt
- 130g tuna (drained weight)
- 250g cottage cheese
- 600ml milk
- 35g whey
- 160g black bean (dry)
- 400g rice
- 100g soy
- 100g lentil (dry)
- 230g oat or quinoa (dry)
- 1450g potato

Mike's Grilled Chicken

500g chicken thigh (boneless skinless)
3 Tbsp reduced fat mayo
¼ onion (grated)
1 clove garlic (minced)
½ tsp ground cumin
½ tsp ground coriander
½ tsp smoked paprika
¼ tsp dried oregano
Chili flakes (to taste)
Salt & pepper

Combine mayo onion, garlic, and all spices in a bowl.

Score chicken, then add to the marinate. Cover and keep in the fridge for at least 1-hour prior to cooking.

Heat oven or BBQ to highest grill setting.

Add chicken to the BBQ or under the grill and cook for 7 mins on one side. Flip and baste with the remaining marinate and cook for a further 7 mins or until chicken is cooked through.

Easy to prepare in bulk and pairs great with our Greek salad.

Per serve | 260 calories | 32g protein | 13g fat | 2g carbohydrates

Garlic Prawns

500g prawns (shelled and deveined)
3 cloves garlic (minced)
5 sprigs of fresh coriander (finely chopped)
¼ tsp smoked paprika
Chili flakes to taste
½ lemon (juice)
2 Tbsp olive oil
Salt & pepper

Combine all ingredients into a large bowl and toss to combine. Allow to sit in the fridge for at least 30mins prior to cooking.
Heat pan or BBQ to medium-high. Add prawns one by one and cook for 2-3mins on one side.
Flip and cook for a further 2-3 minutes or until prawns are cooked through.
Add a couple of Tbsp of water or stock to the remaining sauce mixture, stir, and then add to the pan.
Simmer for a further minute or until the sauce thickens to a glossy texture.
Toss to combine and serve.

These prawns are delicious added to fried rice, mixed into pasta, or made into tacos.

Per serve | 306 calories | 34g protein | 16g fat | 4g carbohydrates

Omelette with Ham & Feta

1 t olive oil
75g champagne ham, diced
1/4 capsicum, finely diced
10g butter
3 whole eggs
30g feta
A handful of rocket or anything leafy and green

Pickled Onions

1 red onion, finely sliced
1/2c white vinegar
1/8c water
2 T sugar
1/2 t salt

In a pot add vinegar, water, sugar, and salt. Simmer until the sugar has dissolved. Add onions and set aside to cool.

To a hot pan, add oil. Then ham and capsicum. Cook until brown or the capsicum is soft. Set aside, but leave pan on the heat.

Crack the eggs into a mixing bowl with a pinch of salt and pepper. Beat well with a fork.

Heat butter in the pant, and once melted, add the eggs and move the pan around to spread out evenly. When the omelette begins to cook and firm up, but still has a little raw egg on top, add the ham, capscium, and feta.

Using a spatula, fold the omelette in half. When it starts to turn golden brown serve topped with pickled onions and rocket.

Per serve | 494 calories | 37g protein | 35g fat | 7g carbohydrates