Let's chat Micros and Macros

And why they are more than just percentage goals to hit.

DENAE HEATON, NTP

Macronutrients

When you think of **Carbohydrates**, what comes to mind? Bread, cake, pasta? Though those are common sources, you can also use foods like vegetables and fruits as more complex and nutrient-dense sources of this macronutrient (Cummings & Stephen, 2008).

What do they do and why are they important?

-Carbohydrates offer a quick source of fuel for the brain and muscles

-As a fiber, they help provide fuel for our microbiome and ensure waste is regular

-When combined with the other two macronutrients, protein and fat, they can help our bodies fight infection, hello immune support! (Nutritional Therapy Association [NTA], 2020)

Protein can be found in wild-caught seafood, grass-fed meat, or pasture-raised animals. It can also be found in some vegetables as well. It's important to note that foods like protein bars, though they may have higher protein levels, can often be lacking other key nutrients our bodies need or contain other filler ingredients that are no Bueno for our bodies.

The Roles of Proteins in our Body:

-Help build our tissues and muscles

-Necessary for antibody production, these are our infection fighters

_Key part of hemoglobin production. Located in red blood cells this is the key protein that transports oxygen around the body.

(NTA, 2020)

I've saved the best Macronutrient for last, **FATS**. Sourced properly, these are necessary for a well-rounded diet and optimal body function. Organic coconut oil, 100% grass-fed animals, and pasture-raised eggs are great sources of healthy fats without the potential for excess toxins to occur (NTA, 2020).

So what part do Fats play in how our body functions?

-Fats are needed to digest fat-soluble vitamins in the body

-Increase satiety (by way of a mental/physical connection)

-Make our food taste amazing!!!

-Help our digestive system to slow down in order to get the most nutrients out of our food. We need to absorb as many nutrients as possible from what we are eating.

(NTA,2020)

Micronutrients-Vitamins

There are two main types of **micronutrients** in the body, **Vitamins**, and **Minerals**. The Macronutrients we covered on the last page are regarded as MACRO because they are more prevalent in the body as far as volume. But these micronutrients play key roles as well. We are going to be covering a few of each type to give you a glimpse into the importance of the little guys.

Vitamin C

This very well-known vitamin is commonly known to be a key component of immune system support. But did you know it has several other duties as well? Things like:
-influencing growth and repair of body tissues
-Improving mood and mental health
-Improves skin health and who doesn't want that?

Food sources containing vitamin C:

Orange Juice, green bell peppers, strawberries, and broccoli are some good sources.

Vitamin B12

Potentially one of the most important of the B vitamins is this guy right here. It serves as a form of protection for our cognitive functions and it also helps breakdown amino and fatty acids to produce energy.

Food sources containing vitamin B12:

According to Medeiros and Wildman (2019), salmon, fried egg (pasture-raised), whole raw milk, and oysters are a few sources you can find this essential vitamin.

Vitamin B7 (Biotin)

This vitamin is well known to benefit hair, skin, and nails. And that is true, but there are many other benefits of this vitamin. Some being that it is necessary to metabolize carbohydrates and fatty acids according to Medeiros and Wildman (2020).

Food sources containing vitamin B7:

Egg yolks, legumes, and whole grains are some of the naturally occurring sources of this vitamin.

Micronutrients-Minerals

Unlike vitamins that can be created by our bodies from the foods we consume, **minerals** need to be sourced from outside sources such as food and beverages directly according to the Nutritional Therapy Association (2020) as they cannot be produced by the body. Minerals have several duties in the body such as the contraction and relaxation of muscles and serving as cofactors for enzyme reactions (NTA, 2020) for example.

Magnesium, one of the macrominerals, is responsible for many key metabolic pathways in the body as well as working closely with vitamin D, converting it to its most active form according to Medeiros and Wildman (2019).

Food sources of Magnesium:
Chlorophyll (found in many leafy greens), coffee and cocoa so yes, in some cases dark chocolate can be beneficial to your body!

Calcium is another important macromineral required by the body. Commonly known to help build strong bones and teeth, calcium also helps maintain a balanced pH in the body as another function.

Food sources of Calcium:
Dairy foods of course, but also green leafy vegetables such as kale, as well as sardines according to Medeiros and Wildman (2019).

The enzymes in the body are heavily dependent on **zinc** to function. It assists in the processes of pH regulation, protein digestion, and immunity within the body. this micromineral, also known as "trace mineral" is very important to the overall function of the body.

Food sources of Zinc:
Oysters, meats, and eggs as well as many other proteins.

As you can see, macronutrients and micronutrients are so much more complex and important than you may have thought. The benefits and responsibilities they have go way beyond a generic approach of "hitting your macros". Just like calories, not all macronutrients are the same. They can affect systems of the body very differently from one to the next.

Reference List

Medeiros, D., Wildman, R. (2019). *Advanced Human Nutrition*. Burlington, MA: Jones & Bartlett Learning, LLC.

Nutritional Therapy Association. (2020). Basics of Nutrition Student Guide [PDF document]. Retrieved from: https://nutritionaltherapy.instructure.com/courses/143/files/2267?wrap=1