Eating For Wellness Mini Course

mealime

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Introduction

Welcome to the Eating for Wellness Mealime ‘mini course’.
We are so excited you’re here.

There’s a lot of advice out there on what to eat and honestly, it can be a bit overwhelming. So for starters we want to define the focus of this course and what we hope you will get out of it.

What this course isn't:

You'll notice in this course we will never recommend that you cut out a food or food group completely. What you eat is highly personal to you and we leave it to you to decide if a certain food does not leave you feeling your best or doesn't fit in your food values.

What this course is:

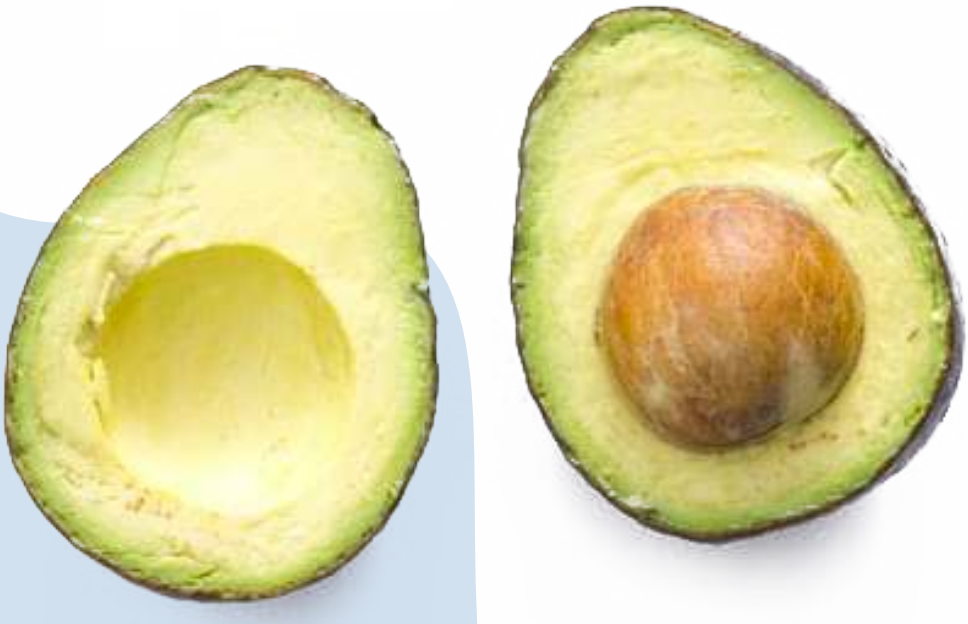
Instead, we will focus on building your foundational nutrition knowledge so that you feel confident in knowing how different foods can impact both your body and mind. You will learn strategies for eating to feel energized and how meal planning can help you achieve a balanced and consistent diet that saves you time, stress, and money.

The course is divided into 3 main topics:

1 **The Fundamentals of Nutrition Knowledge**

2 **Stabilizing Your Energy and Supporting Immunity and Mood**

3 **Meal Planning 101**



Our goal:

We want to empower you to eat in a way that is simple, enjoyable, and will help you feel your best.

Fundamentals of Nutrition Knowledge

1. Macronutrient overview

You've probably heard the term macronutrients thrown around before or maybe you've heard them in the context of someone 'tracking their macros'.

But what exactly are they?

The **three macronutrients**- protein, fat, and carbohydrates are the nutrients your body needs in large amounts to function properly and they are the main building blocks of the foods we eat every day.

Macronutrient:

Macronutrients are nutrients that provide calories or energy and are required in large amounts to maintain body functions and carry out the activities of daily life.

We'll go over each macronutrient in a little more detail to give you an idea of key things to understand about each one.

Carbohydrates

Carbohydrates are your body's main source of energy, the gasoline that keeps us running.

We typically classify carbohydrates in two ways:

1 Simple

Simple Carbohydrates: Short chains of sugar molecules broken down quickly by the body to be used as energy.

Simple carbohydrates are built just as they sound, with a simple structure. You may also know them as simple sugars. Simple carbohydrates break down easily and quickly in the digestive tract to then enter into our bloodstream. While simple sugars are often found in things like **refined grains**, soda, and cookies, they also naturally occur in foods such as fruit and dairy. So, what's the difference between eating a cookie and an orange if they both have 15g of simple sugar? The orange comes loaded with vitamins, minerals, and fiber but the cookie might bring you a little more joy. So eat the orange more often, but don't worry about eating the cookie once and a while too.

Refined Grains: Refined grains, in contrast to whole grains, refers to grain products consisting of grains or grain flours that have been significantly modified from their natural composition and as a result have a lower content of vitamins, minerals, fiber, and protein.

2 Complex

Complex Carbohydrates: Long chains of sugar molecules that the body converts into glucose, which it uses for energy. As complex carbohydrates have longer chains, they take longer to break down and provide more lasting energy in the body than simple carbohydrates.

Complex carbohydrates are, again just as they sound, built with a more complicated structure which takes a longer time to break down and absorb into our bloodstream. This slow breakdown is usually preferred as opposed to a quick breakdown of simple carbohydrates as it leads to a more steady level of blood sugars and more stable energy levels (we'll talk more about this later).

DID YOU KNOW:

Our brains use a lot of energy! In a typical/common diet, where about 50% of your daily calories come from carbohydrates, roughly half of these carbohydrates go towards supplying energy for your brain.

NUTRITION TIP:

While fruit juice still contains vitamins and minerals, most of the fiber is removed with the pulp and skin of the fruit. Losing the benefits of fiber isn't ideal, and you are also left with a much more concentrated amount of sugar per serving in comparison to the whole fruit. If you can, try to eat the whole fruit rather than reaching for juice and if you have juice aim to keep it at around half of a cup!

Simple carbohydrate sources:

honey, syrups, table sugar, refined grains such as white bread, and processed items containing either glucose, fructose, or sucrose (often found in breakfast cereals, granola bars, candy, cookies)

Complex Carbohydrate sources:

whole wheat bread, whole grains (quinoa, wild rice, barley, couscous, etc.), fibrous vegetables, legumes (beans, lentils, peas, etc.)

What about fibre?

There's an exception to every rule right? In the case of carbohydrates, fiber is the exception because it is the only type of carbohydrate that is not broken down and absorbed in the digestive tract to be used for energy. If it isn't broken down and absorbed then how important can it really be? **Very!**

Fiber still interacts with our gut as it moves through our system and plays a super important role in digestion, keeping you regular in the bathroom, regulating blood sugars, keeping cholesterol levels in check, and supporting your immune system.

The kicker is a lot of us don't get enough fiber in our diets. Fiber comes from plants, so adding more plant foods (fruits, vegetables, grains, legumes) to your diet is a sure way to increase your fiber intake.

DID YOU KNOW:

There are two types of fiber: soluble and insoluble.

Soluble fiber binds with water in your digestive tract to create a gel-like consistency that bulks up what comes out the other end and slows the transit time of foods in your digestive system.

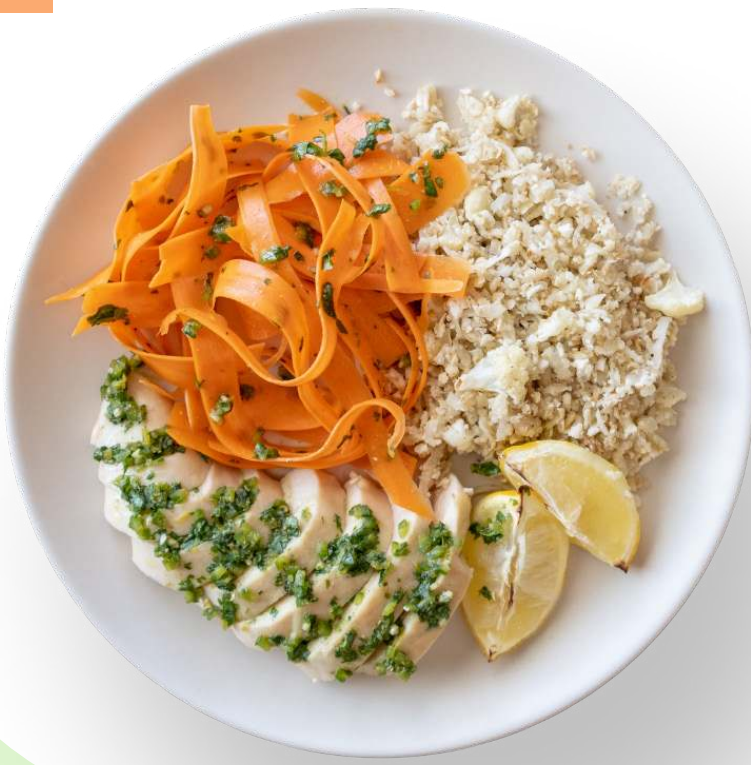
Insoluble fiber doesn't dissolve in water, but works to clear out waste from your digestive system more quickly. The two types of fiber work in tandem with each other and keep your bowel regimen regular and balanced.

NUTRITION TIP:

Look for a good quality whole wheat bread that is higher in protein (3g or more per slice) and fiber (2g or more per slice).

Fiber sources:

Some particularly high fiber foods include beans, lentils, oats, berries, apples, carrots, avocados, and broccoli



Fats

Dietary fats provide the body with energy, help with the absorption of nutrients, contribute to brain and nerve function, and help our bodies produce important hormones. They also help us feel full and satisfied for a longer period of time after eating a meal.

MEALIME TIP:

Look in the nutrition facts of Mealime recipes and see the specific amount of Omega-3's in your meal. Including 2-3 servings of fatty fish per week will help you meet your Omega-3 requirements!

NUTRITION TIP:

Omega-3 and omega-6 are two specific types of polyunsaturated fats that are considered essential nutrients. The term essential nutrients refers to a nutrient our body can not produce on its own and therefore we must get it through the food we eat. While most people get enough omega-6 fats in their diet (often even too many), many people do not get enough omega-3 fats.

Good sources of Omega-3's include fish & seafood (mackerel, salmon, trout, etc.) and nuts & seeds (flaxseed, chia seeds, hemp seeds, walnuts).

The 2 main types of fat you want to be familiar with are saturated and unsaturated.

1 Saturated

Saturated fats are generally the fats you want to eat in moderation due to their association with increased risk of heart disease. No need to do any full on elimination here, but it is good to be aware of which foods tend to contain saturated fats so you can moderate your intake of these.

SATURATED FATS SOURCES: Saturated fats are naturally more common in animal products, particularly red and processed meats (sausages, burgers, bacon, etc.), and in items such as butter, high fat dairy items, pastries, and tropical oils such as coconut and palm.

2 Unsaturated

Unsaturated fats are the fats you want to include more of in your diet. Monounsaturated and polyunsaturated fats are the two most common types of unsaturated fats and they are considered beneficial because they can decrease 'bad' blood cholesterol and contribute to heart health.

UNSATURATED FATS SOURCES: nuts & seeds, ground flaxseed, avocados, olive oil, fish

DID YOU KNOW:

Saturated fats are solid at room temperature while unsaturated fats are liquid.

Protein

Proteins have many important functions in our body including the growth and repair of muscle and tissues, maintaining healthy bones, building hormones and enzymes, and they even play a key role in healthy immune function.

HIGH PROTEIN SOURCES:

meat, fish, eggs, tofu, tempeh, greek yogurt

MODERATE PROTEIN SOURCES:

legumes (beans, peas, lentils), soy beverages, nuts & seeds, nut & seed butters, milk, cheese, cottage cheese, regular yogurt, quinoa

MODEST PROTEIN SOURCES:

Whole grain breads, rice, pasta, couscous, oatmeal

NUTRITION TIP:

If you are plant based looking to get a little extra protein - try soy milk as a plant milk alternative! It contains 8g of protein per cup whereas alternatives such as almond milk contain only 1-2g of protein per cup.

Getting enough protein

Because animal proteins tend to be higher protein foods, if you include these in your diet regularly, you are likely meeting your protein needs.

If you are unsure if your diet has enough protein, you can take your weight in kilograms and use this number multiplied by 0.8 to estimate how much protein to eat per day. So a person weighing 70kg should aim for around 56 grams of protein per day. This is just an estimate as protein needs can differ based on activity level, age, and other factors.

If you eat a more plant based diet, then getting enough protein requires some extra strategizing but is still entirely doable. As you can see by the protein sources listed above, many high protein foods are animal products so having a good sense of plant based sources of protein is an important first step. Ensure you are including at least a moderate source of plant based protein with every meal and try to aim for 20g of protein per meal (including breakfast). By making an effort to incorporate different plant protein sources with each meal, you should be able to meet your needs with food alone. When looking at your plate, try to fill around ¼ with protein sources.

MEALIME TIP:

With Mealime you can filter recipes by macronutrient content for protein, fat, and carbohydrates. You can set a minimum or maximum amount of each macronutrient you would like your recipes to contain. For example, search for recipes where at least 30% of the calories come from protein and only 20% of the calories come from fat (you can do this in 'grams' instead of percentage as well).

Getting the right protein

The research is very clear in telling us that plant based proteins are incredible for our health. Including these proteins in our diet on a daily basis is important. For those of us who still incorporate meat in our diets, it is important to understand how to best choose animal based proteins as it relates to our health.

You may have heard the term 'lean protein' before. Lean protein is referring to sources of protein that are higher in protein but lower in fat. While 'low fat' doesn't equate to 'healthy', as fat is an important component of our diets and crucial to our health, because animal proteins are naturally higher in saturated fats these are the food items we want to moderate our intake of for heart health. Choosing 'lean meats' is a great way to do this.

Tips for choosing lean meats:

- Look for well trimmed eye of round sirloin, top sirloin steak, and extra lean ground beef
- When buying ground turkey look for a higher percent of 'lean meat'
- Lean ham, pork tenderloin or loin chops are good pork choices
- Remove the skin from chicken or turkey and keep in mind that white meat has less fat than dark meat

MEALIME TIP:

Choose from a variety of diets with Mealime that include flexitarian (easy on the meat), vegetarian (no meat), vegan (no animal products), and pescetarian (okay with seafood).

NUTRITION TIP:

If you eat animal proteins such as meat, dairy, and eggs, try to incorporate one plant based protein each day. Plant protein sources are low in saturated fats and high in fiber which is great for heart health. They also contain protective phyto-nutrients that animal sources don't have which provide use with anti-inflammatory and immune benefits.

2. Micronutrients

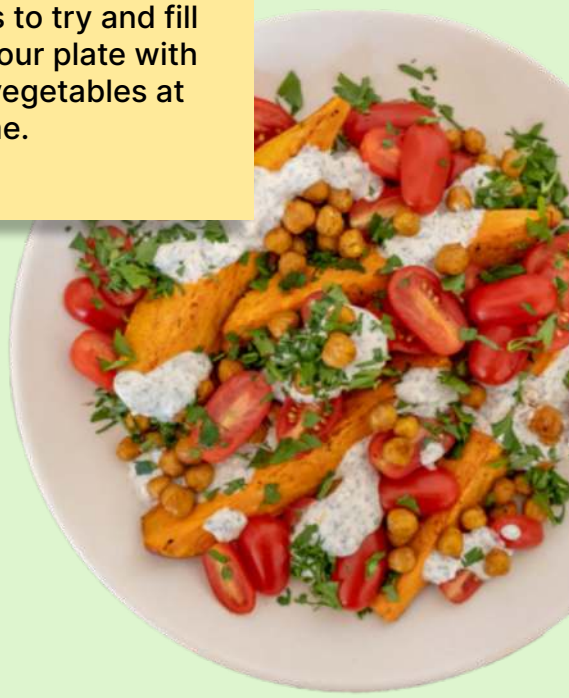
Micronutrients, otherwise known as vitamins and minerals, are the nutrients your body needs in smaller amounts. There are almost 30 “essential” vitamins and minerals that our bodies cannot produce on their own and we must get through food alone.

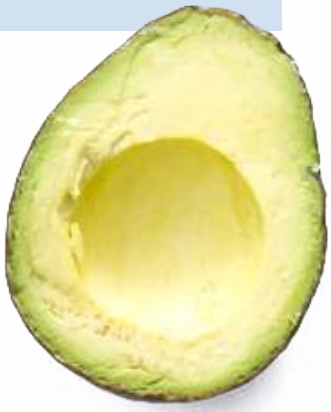
If you’ve heard the term “nutrient dense” to describe a food - this is referring to the food being high in a variety of micronutrients. As you probably know, plant foods are high in vitamins and minerals - but getting all the micronutrients we need doesn’t mean we need to sit down to a full plate of vegetables 3 times a day. Instead, this is best achieved through eating a well rounded diet with a good variety of foods from different food groups. A well-rounded diet that includes plenty of fruits, vegetables, legumes, whole grains, and lean sources of protein, along with healthy fats, such as nuts and olive oil.

There are a few micronutrients that North Americans are more commonly deficient in: **Calcium, Vitamin D, and Potassium.**

Micronutrients:
Vitamins and minerals needed by the body in very small amounts that perform a range of functions, including enabling the body to produce enzymes, hormones and other substances needed for normal growth and development. Deficiency in any micronutrient can cause severe and even life-threatening conditions.

NUTRITION TIP:
A good general rule of thumb is to try and fill half of your plate with fruit or vegetables at meal time.





MEALIME TIP:
Mealime incorporates a variety of fruits and vegetables into each recipe to keep the balance, without compromising on flavor.

Here's why getting enough of these nutrients is important (and good sources of each one):

Calcium:

Critical to your bone health.

HOW TO GET IT:

dairy products (milk, cheese, yogurt, kefir), dark leafy greens (spinach, kale, okra, bok choy), soy products (tofu, soy milk, tempeh), whole wheat bread products with fortified flour

Vitamin D:

Also critical in bone health (you need Vitamin D to properly absorb calcium), contributes to neurotransmitter synthesis, and an important component of immune function.

HOW TO GET IT:

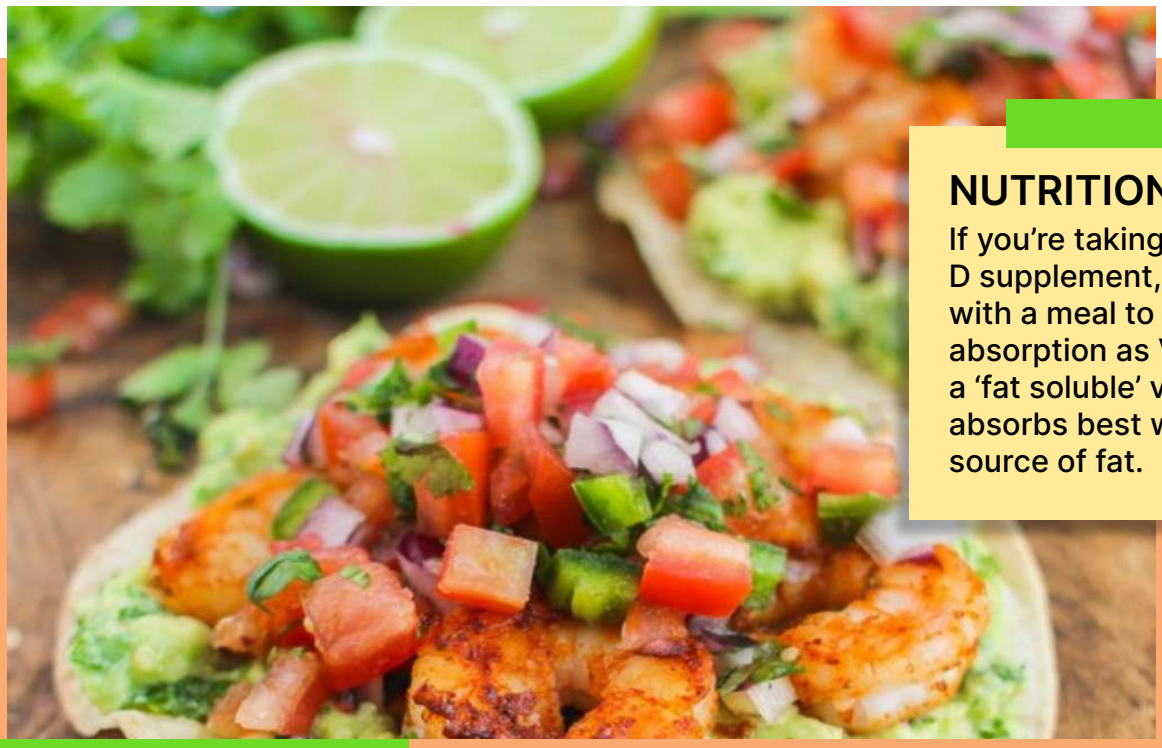
Vitamin D is the one supplement that everyone should be taking. It is very low in our food supply and although it is made by our skin when we are exposed to UV rays from the sun, we don't get enough sunlight to have sufficient levels of Vitamin D. Taking 1000IU of Vitamin D3 in summer and 2000IU in winter is generally a good place to start. However, talk to a health practitioner about a safe and effective dose for you.

Potassium:

An important electrolyte in our body that helps with fluid balance, muscle contraction, building proteins, and making carbohydrates available for energy.

HOW TO GET IT:

melons, cooked spinach, cooked broccoli, potatoes, sweet potatoes, avocado, banana, beans, tomato sauce



NUTRITION TIP:

If you're taking a Vitamin D supplement, try taking it with a meal to enhance absorption as Vitamin D is a 'fat soluble' vitamin and absorbs best with a source of fat.

3. Building a balanced meal

If building a balanced meal is something you've never thought about before, there are two main things to keep in mind.

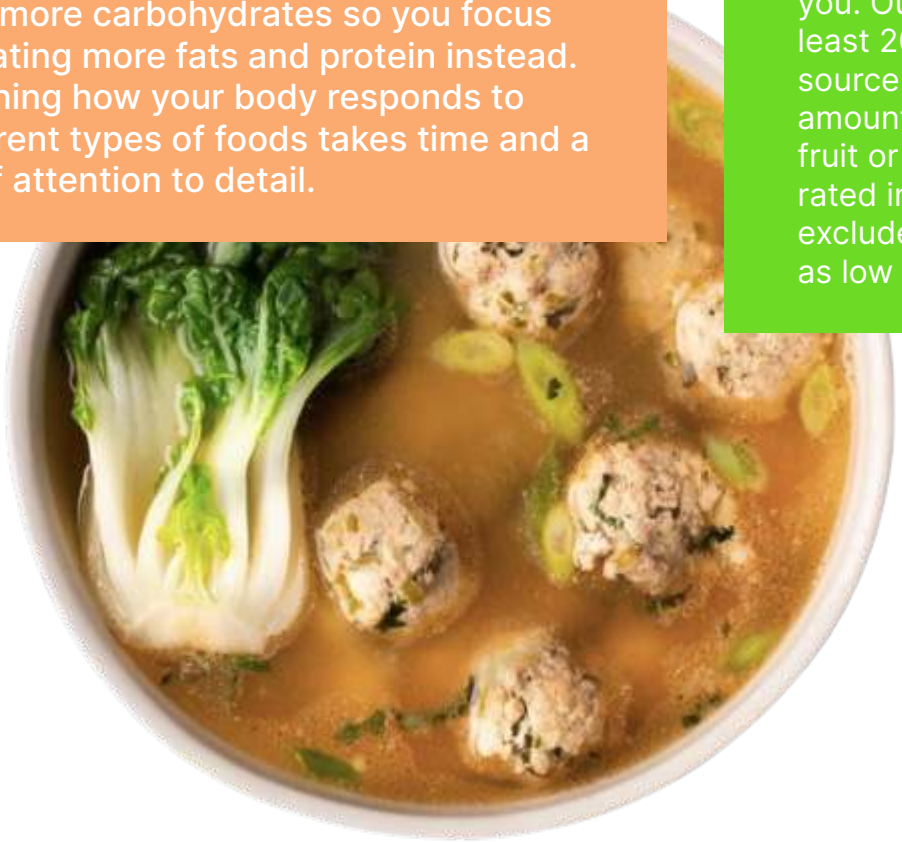
1 First, try to include a good source of protein, fat, and carbohydrate with each meal. A way to think of this is eating 3 for 3, all three macronutrients at all three meals.

2 The second thing is focus on incorporating either fruit or vegetables with each meal. This will help contribute to your daily micronutrient and fiber needs.

If you're more experienced with building balanced meals you may be familiar with what a macronutrient breakdown looks like in a typical diet- around 50% carbohydrates, 25% protein, and 25% fat. This balance works for a lot of people, but there is no perfect formula for how to eat that can be applied to everyone. Some people eat according to a specific macronutrient breakdown in order to manage chronic disease, help build muscle, or because a certain balance of macros just helps them feel their best.

You might feel more energized when eating more complex carbohydrates or maybe you notice you feel more sluggish with more carbohydrates so you focus on eating more fats and protein instead. Learning how your body responds to different types of foods takes time and a lot of attention to detail.

MEALIME TIP:
With Mealime, the work of balancing a meal is done for you. Our meals contain at least 20g of protein, a good source of fat, and moderate amount of carbohydrate with fruit or vegetables incorporated into each meal (this excludes specific diets such as low carbohydrate or keto).



4. Reading nutrition labels

Being familiar with how to navigate a nutritional label can help us look beyond the 'food marketing' often splashed across the front of many products in the grocery store and give us confidence to make informed decisions in what we are purchasing. This section may be a little dry for some, but the ability to scan a label quickly for key information is a great skill to have and contributes to effective, stress free grocery shopping (yes please).

So, let's take a walk through each section of a nutrition facts label.

Serving Information

First things first, we want to know how big the 'serving size' is in reference to the nutritional value. Make sure you don't skim over this as it can be easy to assume that a serving size is bigger than what the package actually specifies. Also, keep in mind that the listed serving size is a reflection of how much people typically eat or drink and not a recommendation of how much you 'should' eat or drink. Similar foods are standardized to use similar serving sizes and units (ex. grams or cups) making it easier to compare products.

The nutrient amounts listed below on the label, as well as the calories, are all referencing the serving size listed above. If you consume double the serving size listed, you will be getting double the calories and daily value of nutrients.

Calories

The calories listed in the nutrition facts table tell you how much energy is consumed per serving. Nothing too complicated here. If you eat half of the serving size, your calorie intake will be cut in half. If you eat double the serving size, your calorie intake will be doubled from what is listed.

Nutrients

There is lots of good info to look at in this section of the nutrition label. In the nutrients listed here you will see nutrients we want to get more of, and nutrients that we want to moderate our intake of.

Nutrients to have in moderation: Sodium, Saturated Fat, Added Sugars

Sodium, saturated fats, and added sugars are part of our diets and the goal is not to eliminate these completely (the right amount of sodium keeps us alive so you get the point). Rather, these are the nutrients we want to watch our intake of because it's easy to consume them in excess which may lead to adverse health effects such as cardiovascular disease and high blood pressure.

Sugar

Total sugars include both the naturally occurring sugars and added sugars in an item. **Added sugars** refer to the sugars that are added in food processing. When we see "includes added sugars" on the label we know that the grams of 'added sugar' has been included in the total sugar amount above.

ADDED SUGARS: Added sugars are simple sugars (sucrose, fructose, dextrose, syrups, etc.) that are added during the processing of a food item. They are not naturally occurring sugars as found in milk and fruit.

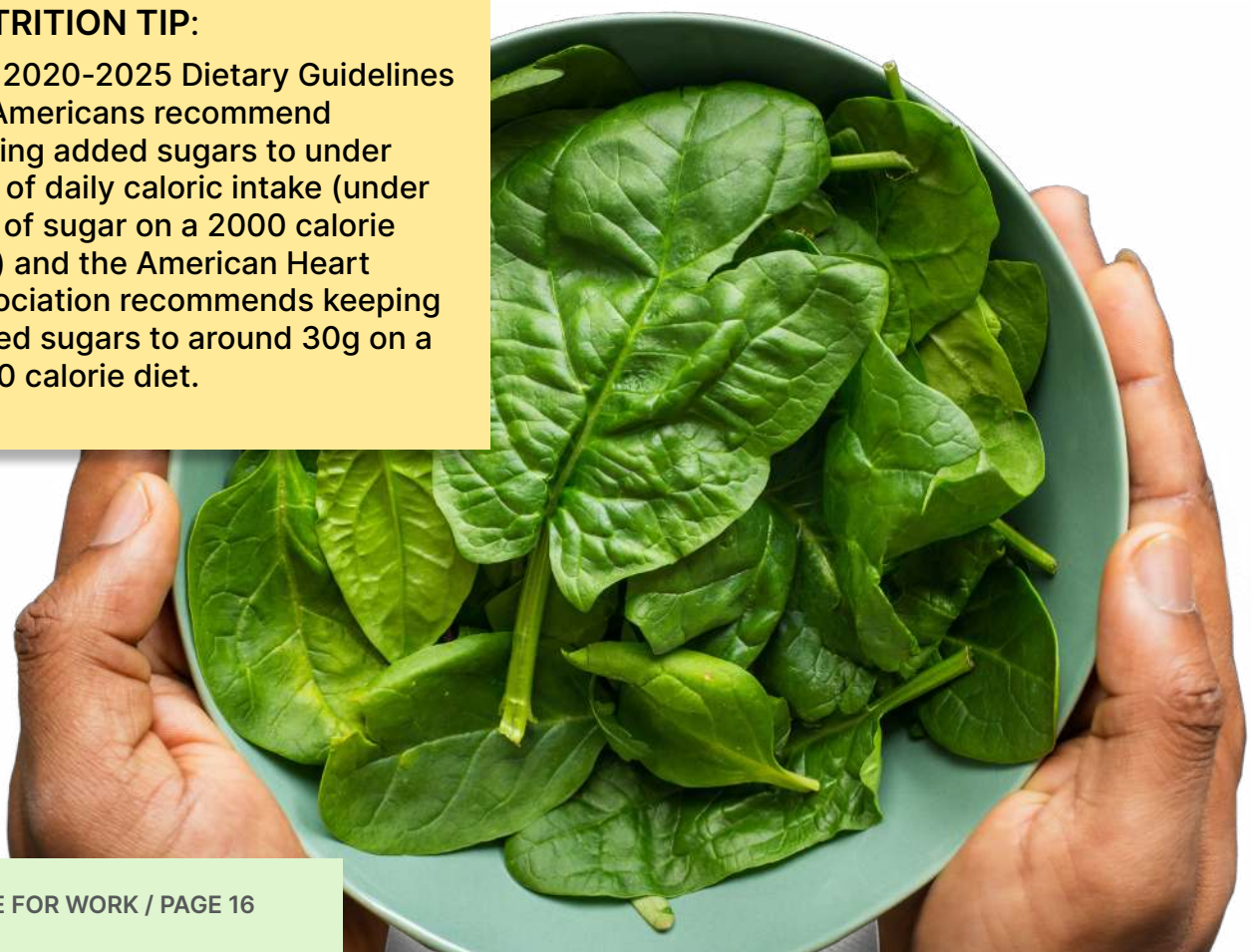
Nutrients to Get More Of:

Dietary Fiber, Vitamin D, Calcium, Iron, Potassium

We know a lot of North American's aren't getting enough dietary fiber, vitamin D, calcium, iron, and potassium in our diets compared to the recommended amounts. Eating more of these nutrients can give us protective health benefits so picking products (ex. bread) with higher levels of these is ideal. Getting more fiber in our diet can help to keep our trips to the bathroom regular, stabilize blood sugars, and lower cholesterol levels. Diets high in vitamin D, calcium, iron, and potassium can reduce the risk of developing osteoporosis, anemia, and high blood pressure.

NUTRITION TIP:

The 2020-2025 Dietary Guidelines for Americans recommend limiting added sugars to under 10% of daily caloric intake (under 50g of sugar on a 2000 calorie diet) and the American Heart Association recommends keeping added sugars to around 30g on a 2000 calorie diet.



Percent Daily Value

The 'Percent Daily Value' refers to how much of a nutrient is in a single serving of a food product, as a percent of the recommended daily allowance of that nutrient. This helps us to determine if a product is high or low in a particular nutrient and how it will be contributing to our daily diet.

- 5% DV or less of a nutrient per serving is considered low
- 20% DV or more of a nutrient per serving is considered high

As we previously discussed, aim to choose foods that are:

- Higher in %DV for Dietary Fiber, Vitamin D, Calcium, Iron, and Potassium
- Lower in %DV for Saturated Fat, Sodium, and Added Sugars

NUTRITION TIP:

Try using the % Daily Values to compare nutrient amounts between different products, just make sure the serving sizes are the same. Also keep in mind how many servings you are eating. If a package of cheese lists one serving as '2 slices' which provides 40% of the percent daily value, and you end up having 4 slices (x2 servings) then you will have consumed 80% of the percent daily value for saturated fat.

MEALIME TIP: Get access to full, in depth nutritional info for each recipe on the Mealime app.

As always, remember that a single day of eating won't make or break your health. It's all about the regular patterns of how we eat that impacts our health and wellbeing in the long run. There is probably going to be days we eat too much saturated fat and not enough fiber but as long as we're playing the long game, that's what counts.

Serving Information

Calories

Quick Guide to Percent Daily Value (%DV)

Nutrients

Nutrition Facts

8 servings per container

Serving size **2/3 cup (55g)**

Amount per serving	
Calories	**230**
	% Daily Value*
Total Fat 8g	**10%**
Saturated Fat 1g	**5%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 160mg	**7%**
Total Carbohydrate 37g	**13%**
Dietary Fiber 4g	**14%**
Total Sugars 12g	
Includes 10g Added Sugars	**20%**
Protein 3g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 240mg	6%

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

- 5% or less is **low**
- 20% or more is **high**

Stabilizing Your Energy and Supporting Immunity and Mood

1. Preventing The Afternoon Crash

We all know the feeling of the afternoon crash. It feels like you're operating in slow motion and the urge to have another coffee is definitely real.

DID YOU KNOW:

As part of our natural circadian rhythm melatonin is released in the early afternoon causing us to feel sluggish and tired (typically between 1 to 3pm).

While there isn't much we can do to prevent the natural cycling of our circadian rhythm, what we eat for breakfast and lunch can definitely contribute to how we are feeling by 2pm.

Earlier we briefly went over the difference between simple and complex carbohydrates. This comes back into play when discussing energy levels.

When we eat simple carbohydrates (many breakfast cereals, flavored yogurts, granola bars, muffins, white breads) they absorb more quickly into our bloodstream causing a spike in our blood sugars which, unless we are doing some moderate to high intensity exercise, is followed by a dip in our blood sugars that tends to leave us feeling sluggish and a little foggy in the brain. For this reason eating breakfast and lunch with complex carbohydrates (oatmeal, fruit, whole wheat bread etc.) paired with a good protein and fat is important to help your energy stay balanced.

MEALIME TIP:

Mealime meals include a good source of protein and focus on complex carbohydrates to keep you feeling full and energized throughout your day.

NUTRITION TIP:

If you do a mid-morning or mid-afternoon snack, try and have something that is a good source of protein (ex. nuts, greek yogurt with some fruit, or roasted chickpeas)

2. What About Caffeine?

Sleep allows our body and brain to recover leading to improved mental and physical performance the following day and in the long term. There are a lot of reasons why getting enough sleep can be difficult, so we want to give ourselves the best chance possible at getting the best sleep we can.

If you're an avid coffee consumer and have a difficult time falling asleep, it might be worth it to assess your caffeine habits.

The half-life of caffeine is around 5 hours meaning if you consume an 8oz or 250ml cup of coffee with ~100mg of caffeine, you will have 50mg left in your system after 5 hours, 25mg after another 5 hours, and so on. If you have a rough night of sleep and overcompensate with coffee to keep you going the next day, you may still have a decent amount of caffeine in your system by the time you are trying to fall asleep, leading to another night of bad sleep and perpetuating the cycle to continue.

Keep in mind coffee is a well researched plant extract that has documented health benefits, so while giving up caffeine is the right answer for some, it can still be part of a healthy regimen for many people.

Here's what the evidence says about coffee:

- It's high in anti-inflammatory and antioxidant phyto chemicals that may also boost the health of our gut microbiome
- Coffee is a **nootropic** that can enhance mental performance
- Moderate coffee intake is associated with reduced risk of type 2 diabetes and non-alcoholic fatty liver disease

Nootropic: substances used to enhance memory or other cognitive functions

So how do we use caffeine to our advantage?

Know your limit: No two people have the same metabolism and so caffeine will impact each person differently.
Between 1-3 cups of coffee per day is the sweet spot for most.

Don't drink it past a certain time: Try and have your last cup by lunch time. If you feel like you need something in the afternoon, try opting for a cup of tea instead or even a decaf coffee which still provides a very small amount of caffeine.

Caffeine content of common beverages:

1 8oz/250ml coffee - 95mg
1 oz espresso - 64 mg
8 oz brewed tea - 47mg
8 oz decaf coffee - 7mg

NUTRITION TIP:
If you think you need to cut down on your coffee intake, try switching to a single shot americano as these contain much less caffeine within the same volume of drink.

3. Drinking Water For Energy

Some days it can be easy to hit 12pm before thinking, “have I drank any water today?” Especially if you are in a colder climate, drinking water might not be the main thing on your mind.

Some of the common functions of water in our body include:

- Moving waste and nutrients through the body
- Maintaining normal blood pressure
- Regulating body temperature
- Cushioning and protecting joints

Given so much of our physical self is made up of water it makes sense that if we are dehydrated our physical function will be altered in certain ways.

It’s easy to underestimate the power of water in our day but even mild dehydration can decrease energy levels, impair mood, and lead to reductions in memory and brain performance. Aiming for around 8-10 cups (250ml) of water a day is ideal for hydration (try to space them out throughout your day as well!). If you are exercising and sweating keep in mind you will want to replace water lost through this activity as well.

DID YOU KNOW:
Approximately 60% of our body is made up of water and more specifically around 85% of our brain and 75% of our muscles are water.

If you aren’t sure if you are getting enough water, check for these symptoms:

THIRST
If you have a dry mouth and/or are feeling thirsty, that’s your signal that you are already slightly dehydrated.

MOOD
Unable to focus, tired, potential headaches.

URINE
You are aiming for a very light yellow color and if it’s darker there’s a good chance you may be dehydrated.

Tips on drinking more water:

FIND A WATER BOTTLE THAT'S EASY TO DRINK OUT OF

If you need to unscrew an awkward lid every time you reach for your water bottle then that isn't conducive to drinking more water at all. Find something with a quick and accessible lid that doesn't drive you nuts.

STRAWS

Straws are wonderful tools for drinking more water. First of all, you just get more fluid in your mouth when you drink from a straw in comparison to sipping from a glass. Second, they are great for mindless sipping which can really add up by the end of the day. There are tons of durable, reusable straws on the market these days made from glass, metal, or silicone with options for different widths and even collapsable options (why not).

FLAVOR

Maybe a controversial topic, but there's some people who just don't like the 'taste' of water. If this is you, and you haven't started adding flavor to your water yet- this is your sign to start. Cut up fruit (citrus, berries, apple), herbs (mint, rosemary, basil), and cucumber can all jazz up your water with a little effort.

4. Ways To Support Immune Health

Our immune systems are wildy intricate and fascinating things. Just like our general health there is no one food that works as a 'silver bullet' to strengthen our immune system. Instead, adopting a variety of immune supporting actions consistently will contribute to our immune health as a whole.

As we look to strengthen our immune system we have to consider where the majority of our immune cells reside. Where is this? Our gut.

The gut may seem like a mysterious place. It houses trillions of protective bacteria and impacts many different aspects of our health including our digestive, neurological, and immune systems. Just like our skin is a barrier between us and the outside world, our gut is also a barrier between us and the outer world. It chooses what to let in and what to keep out, and relies on all three systems (digestive, neurological, and immune) to function properly.

A healthy gut houses a variety of 'good' bacteria within it's **microbiome** that serve many different purposes including (and not limited to) producing multiple B vitamins, regulating hormones, and reducing inflammation.

Microbiome:
Bacteria and other microbes (yeasts, fungi) living in the gut and other places on the body.

DID YOU KNOW:
Approximately 70-80% of immune cells reside in our gut.

The good bacteria in our gut is also considered the first layer of defense in our gut barrier, sometimes referred to as the 'biological barrier'. When our gut barrier is working well, our protective bacteria produce substances (lactic acid, hydrogen peroxide, bacteriocins) that help to kill off bugs that make us sick. When our gut barrier is compromised, unwanted bacteria can seep in and cause an inflammatory response in the body.

So how can we feed the good bacteria in our gut and strengthen our gut barrier? What can we do to support a robust immune system? The following tips are a great place to start.

*These recommendations are meant for a generally healthy population. If you have a s ignificantly weakened immune system or digestive issues working one on one with a dietitian and/or other qualified health professional who specializes in this area is recommended.

DID YOU KNOW:
The gut microbiome can begin to change in as little as 24 hours in response to a major dietary shift.

Diverse Plant Foods

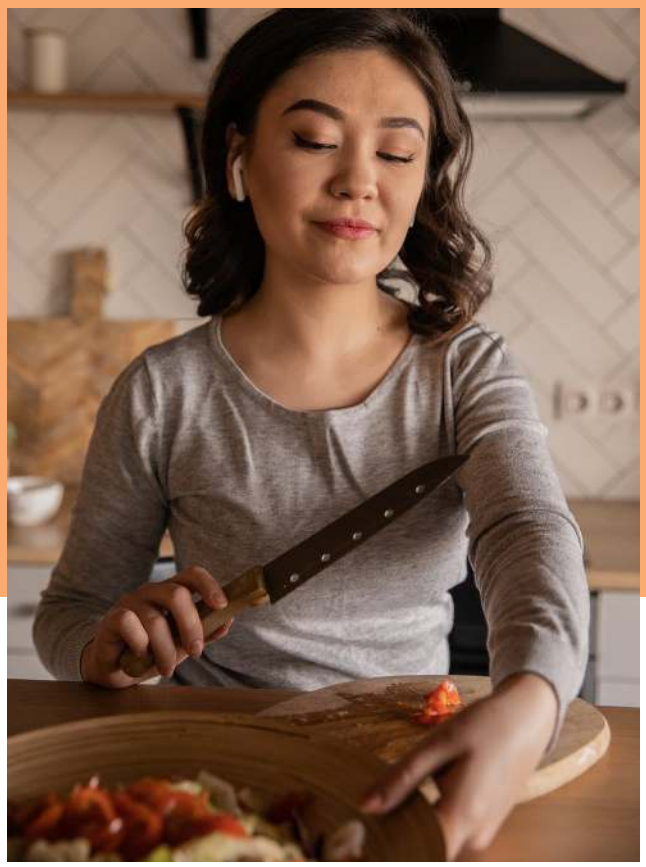
Incorporating more plant foods into your diet is one of the most powerful things you can do for your health. Good bacteria love plants! Fiber found in plant foods ferment in the gut to produce short chain fatty acids (just like they sound- very small fats) that feed and strengthen gut cells and bolster the defensive immune functions of the gut. Fiber isn't the only component of plants contributing to gut resilience, others include: resistant starches, polyphenols, and prebiotics.

Key Immune Nutrients

There are a few nutrients that play a particularly important role in immune function you want to ensure you are getting enough of in your diet.

NUTRITION TIP:

High fiber diets tend to increase favorable bacterial species such as Lactobacillus while hindering the growth of unwanted species such as Clostridium.



ZINC:

High protein foods are typically good sources of zinc such as seafood, meat, lentils, and beans. Oysters are one of the highest food sources of zinc!

VITAMIN D:

As previously discussed Vitamin D is a tricky one. Wild caught salmon, canned tuna, and canned salmon are all good sources of Vitamin D but it is challenging to get enough of this vitamin though diet and sunlight alone. Talk to your healthcare provider about beginning a daily Vitamin D3 supplement.

VITAMIN C:

There are lots of good food sources of Vitamin C including raw bell peppers (heat that occurs during cooking can degrade Vitamin C), strawberries, kiwi, grapefruit, orange, raw kale, raw broccoli, and mango

→ MEALIME TIP: Trying a flexitarian diet (easy on the meat) is a great way to include more nutrient dense plant foods in your daily meals.

Prebiotics and Probiotics

These are trendy words in the nutrition world but what do they actually mean and how are they relevant?

Prebiotics are non-digestible components of food that are associated with the growth of good bacteria in your gut. They promote "good" bacteria.

SOURCES OF PREBIOTICS:

Many fruits, vegetables, and whole grains contain prebiotics, in particular garlic, onions, bananas, apples, leeks, and oats.

Probiotics are "good" bacteria that help to repopulate the healthy bacteria in our gut. Not just any microbe is considered a probiotic though. Probiotics are very specific microbes that research has demonstrated to have benefits to our health. You'll commonly hear "fermented foods are a good source of probiotics". Although some research suggests that fermented foods do have a positive impact on the gut microbiome, it is still incorrect to call all fermented foods 'probiotic' unless they have actual researched probiotic strains present. So unless a food manufacturer is adding a known evidence-based probiotic strain to an item, there shouldn't be any probiotic claims on the product (look for products with Lactobacillus or Bifidobacteria strains on the labelling).

SOURCES OF PROBIOTICS:

Yogurt, kefir, non-heated kimchi and sauerkraut, probiotic supplements

*If you think you may benefit from a probiotic supplement, speak to a qualified health professional about finding one that is best for you.

If you are looking for probiotic foods remember to check the labels of items such as kimchi, yogurt, kefir, and sauerkraut to see if they actually contain evidence based probiotic strains.

Managing Stress, Getting Enough Sleep, Regular Exercise

These are the key non-diet factors that also have a big impact on our gut resilience. Without a doubt these things are easier said than done and sometimes they are simply out of our control. It's all about small steps in the right direction.

DID YOU KNOW:

Diets high in sugar, saturated fat, and alcohol consumption are associated with gut barrier dysfunction as they favor unwanted bacteria species such as Bacteroides (the perfect name for villainous bacteria).

4. Food for Mood

Most of us can confidently say that what we eat impacts our physical health. But can we confidently say the same about our **mental health?**

Turns out, what we eat plays a serious role in our mental health. Our brain is an organ and just like our heart, kidneys, gut, and liver can be impacted by the food we eat, it's no surprise our brain is part of the club. Although the relationship is very complex, nutrition and **mental health** are highly intertwined and if one is compromised, then it's likely the other is suffering as well.

Mental Health: Our emotional, psychological, and social well-being. Mental health impacts how we think, feel, and act. It also helps determine how we handle stress, relate to others, and make choices.

Eating foods that give us the right nutrients in sufficient amounts helps to support our mental health in two ways:

1 Support the integrity of our brain. Damage can cause cognitive impairment such as memory loss, slower processing and thinking. Build **neurotransmitters** and support healthy functioning

2 Prevent damage. **Neurotransmitters** are our brain chemicals that influence our mood and health

DID YOU KNOW:
In 2017, around 17.3 million adults aged 18 or older in the U.S. had experienced at least one major depressive episode in the last year (6.7% of adults in the U.S.)

Neurotransmitters: Chemical messengers within the body that help to regulate a variety of bodily functions including heart rate, muscle contraction, appetite, mood, and digestion.

Here's a look at some of the main neurotransmitters that impact our mood:

SEROTONIN: Sleep, calmness & relaxation. Known as the "happy chemical" – low levels are associated with depression.

DOPAMINE: Energized, attention & alertness. Responsible for pleasure & motivation.

NOR-EPINEPHERINE: A stress hormone; involved in "fight or flight" response. Aids in attention & focus.

ENDORPHINS: Comfort, well-being, pleasure & euphoria.

So, what does the research say about food and mental health?

Research Snapshot:

STUDY #1:

This study followed 10,094 college aged students over 4 years and ranked individual student's diets depending on how closely they adhered to a mediteranean diet. They found that the students in the top half of the group who adhered closest to a mediteranean diet had a 42-50% decreased risk of getting depressed.

Sánchez-Villegas, A., Delgado-Rodríguez, M. et al., 2009. Association of the Mediterranean dietary pattern with the incidence of depression. ARCH GEN PSYCHIATRY, 66(10).

STUDY #2:

This meta-analysis study (statistical analysis combining the results of multiple scientific studies) looked at the outcomes of 16 different studies that aimed to decrease the intake of unhealthy foods and improve nutrient intake2. The analysis showed that the dietary interventions in these studies significantly reduced symptoms of depression and anxiety.

Firth, J., & Marx, W. et al., 2019. The Effects of Dietary Improvement on Symptoms of Depression and Anxiety: A Meta-Analysis of Randomized Controlled Trials. Psychosomatic Medicine, 81(3).

STUDY #3:

In this randomized control study a mediterranean diet was added as an intervention for individuals diagnosed with major depression and already receiving treatment (either psychotherapy, pharmacotherapy, or both). Within a 12 week period 33% went into full remission.

Jacka, F., & O'Neil, A. et al., 2017. A randomised controlled trial of dietary improvement for adults with major depression (the 'SMILES' trial). BMC Medicine, 15(1).

DID YOU KNOW:

Around 90% of our body's serotonin is produced in our gut! More research is also beginning to look at how the state of our gut impacts our mental wellbeing.

Given the research, whether you struggle with mental health or it's something you want to be proactive about, 'feeding' our brains is important. So, where do we start?

*These are general recommendations, if you are struggling with mental illness it is important to work with your primary health care provider to decide on a comprehensive treatment plan that is best for you.

The Mediterranean Diet

The staples of a mediterranean diet include a variety of fruits and vegetables, fish, whole grains, legumes, nuts, seeds, and olive oil. Now, although this is referred to as a 'diet' there is no set of strict rules to follow, just general recommendations of which foods to incorporate more often and which foods to eat less often. The mediterranean style of eating avoids regular intake of refined carbohydrates (white breads, pastries, etc.), highly processed foods, red meat, and sugary foods and beverages. All in all? There's nothing too groundbreaking about it, but the benefits for our brain are undeniable.

MEALIME TIP: Browse through our 'Mediterranean Recipe' category to incorporate more meals that follow this style of eating.

Brain Nutrients

Let's talk about what nutrients are particularly important in our brain health and function.

VITAMIN D3

Vitamin D plays a role in neurotransmitter synthesis and we also have receptors for vitamin D in our hippocampus (a structure embedded in our brain that has a key role in memory and learning). Adult population studies indicate that low vitamin D levels may increase the risk of depression, Alzheimer's disease, and impaired cognitive function. Still, research is mixed on the use of vitamin D to help reduce symptoms of depression.

OMEGA-3

Omega-3 fats help to build cell membrane structures throughout the body and the brain. They also contribute anti-inflammatory benefits to our body (particularly EPA and DHA types). Given many of us don't get enough Omega-3's our diet, supplementation is often used as a buffer but if you are including fatty fish in your diet twice a week you are likely meeting your needs. Omega-3 supplementation is widely used in the treatment of various conditions, in particular major depressive disorder and bipolar disorder.

B VITAMINS

The B Vitamins are 8 essential nutrients (we need to get them through food) that contribute to our brain health and are involved in making various neurotransmitters such as dopamine, serotonin, noradrenaline, and melatonin. When a deficiency of one of these vitamins occurs, their role in mental health and brain functioning becomes quite clear. Often depressive symptoms or impaired memory are among the first to appear. With thiamine deficiency, irritability and poor memory are common. A deficiency in Niacin can lead to feeling disoriented and apathetic. The research shows an association between folate deficiency and higher incidence of depression.

DID YOU KNOW:

The full list of B vitamins includes vitamin B1 (thiamine), vitamin B2 (riboflavin), vitamin B3 (niacin), vitamin B5 (pantothenic acid), vitamin B6 (pyrodoxine), vitamin B9 (folate), and vitamin B12 (cyanocobalamin).

NUTRITION TIP:

If you are vegan or vegetarian, have restricted food choices, are over the age of 50, or taking medications that reduce absorption, you may need a supplement for vitamin B12.

NUTRITION TIP:

If you are prone to anxiety make sure you aren't over doing it with caffeine and try eating every 4 hours or so. When we go without eating for longer periods of time our body releases hormones that can contribute to feeling anxious.

We've discussed how to get Vitamin D and Omega-3's, so won't go over this again but let's address the B-Vitamins.

SOURCES OF B-VITAMINS:

Food sources of B-vitamins include whole grains, nuts and seeds, green leafy vegetables, citrus fruits, eggs, and lean meats. It's all about getting a variety of these foods to meet your needs for the different B-vitamins.

Key Takeaway

It can be overwhelming to read through nutrition information and there is a tendency to mentally start picking through your diet. If you find yourself thinking "I'm probably deficient in multiple nutrients, I think I need supplement A, B, and C", take a pause, chances are you're okay. If you can, taking a 'food first' approach is best.

Bring it back to the basics of choosing a variety of **whole foods** to the best of your ability each day (the mediterranean diet is a great example of this). There will always be situations where supplements are useful, such as Vitamin D3 and Omega-3's for those who don't have fish regularly. Just keep in mind that supplements are meant to supplement a balanced diet, not replace it.

Whole Foods: Foods that are processed and refined as little as possible with little or no additives such as whole grains, legumes, fish, lean meats, nuts, seeds, fruits, and vegetables

Meal Planning 101

We've gone over a lot of information in this course about how the food we eat impacts our health, both body and mind. The final step is figuring out how we can practically apply this knowledge into our daily life. Life is stressful and we have a lot on our 'plate' before we even step into the kitchen. So how can we take what we know about nutrition and make it work in our day to day life? This is where meal planning has a lot of advantages.

1. How Can Meal Planning Benefit Me?

DID YOU KNOW:
The average cost of wasted food per American household is $1,866 each year. Mealime was designed to reduce household food waste and save you money in the long run. Look under the 'Food Waste Saved' graph in the app to calculate how much individual food waste your household saves each month using Mealime.

SAVE MONEY

The money saved through meal planning can add up in big ways over the course of even a few months. Planning your meals helps to save money by significantly reducing food waste (no more back-of fridge-rotting-produce-guilty-feelings). You can go to the store with a plan and a list and you are less likely to make spontaneous purchases of foods you don't need. Planning your meals also decreases the chances of you ordering food in/eating out because you don't have anything to eat. We've all been there, but the bank account can start to take a hit when we start ordering in regularly.

MEALIME TIP: To help you stay within your weekly food budget, you can filter meals by 'cost per serving

SAVE TIME

In the beginning, meal planning may take a little extra time and effort but once you find your groove, it can save you a lot of time (factor out those extra trips to the grocery store to get last minute ingredients). You can build an arsenal of favorite recipes and meals that become part of your regular rotation and the decision fatigue that comes with choosing what to eat each night becomes less and less.

MAKE HEALTHIER CHOICES

Meal planning brings a lot of self awareness into your daily food choices. When you take the time to sit down and choose your meals for the week you put good intentions into action and prepare yourself for success.

MEALIME TIP: With Mealime all your past meal plans are saved within the app so you can cycle through your favorite weekly meal plans to save time. Plus, your grocery list is automatically generated for you (with the option for delivery)

PREP EXTRA

With meal planning you don't have to hope you have leftovers for lunch the next day, you can take full control and plan for it! This ties back into saving time and saving money because you can save yourself the work of making an entirely separate lunch or the money spent on buying lunch at work.

MEALIME TIP: Choosing the serving size for each recipe you add to your meal plan makes it easy to prep extra of a particular meal. The additional servings will automatically factor into your generated grocery list (so you aren't trying to calculate how much chicken you need for the week in the aisle of the grocery store).

2. How To Get Started

If you're used to a more free style approach when it comes to cooking, meal planning can seem a bit overwhelming at first and that's completely normal. It's best to start slowly and build as you see success.

1 Decide Which Meals You Want to Plan

To start, you may want to try planning dinners for 2 or 3 days a week. Once you feel comfortable with this add in more meals.

MEALIME TIP: You can use Mealime as much or as little as you like. You can plan 2 meals per week, skip a week of planning entirely, or plan breakfast, lunch, and dinner for each day if that's your style

2 Be Realistic

Some weeks are busier than others so take this into account when planning your meals. If you know you have a low key week coming up, try a few new recipes! Otherwise, choose simple meals with shorter cook times that you are familiar with to save yourself some hassle.

MEALIME TIP: Mealime recipes are developed to be relatively quick and simple. Many recipes take only 30 minutes to make, and you can search for meals based on cooking time as you like

3 Sharing is Caring

If you're planning meals for more than yourself, invite other members of your household to help you choose the meals each week. Building every family member's preferences into each meal can be a challenge, but sometimes the best we can do is dedicate different meals throughout the week to match different family member's likes. Doing this increases your chances of successful meal planning in the long term.

3. Action Steps: Meal Planning for Beginners

If you're feeling a bit overwhelmed by the task of meal planning, we get it. Use the following steps to guide you through the process of meal planning with Mealime and soon enough you won't even think twice about it.

1 Look at your schedule for the next week

2 Note which days you will need extra simple meals

3 Note which ingredients you have in your fridge, pantry, or freezer that you'd like to use up.

4 Choose easy and familiar recipes to make on the busy days you previously noted.

MEALIME TIP: Mealime has a 'Quick and Easy' recipe category for those extra busy days.

5 Choose recipes that incorporate ingredients you have on hand and would like to use up

MEALIME TIP: Mealime's 'Use what's in your pantry' feature is designed to help you with this. Just select any ingredients from the provided list that you would like to use up and Mealime will create a custom meal plan for you using all the items you select. Alternatively, while building a meal plan try searching the ingredients you would like to use (e.g. "cauli-flower" and "cheddar cheese") in the search bar to browse recipes using those ingredients.

6 Add any other recipes to complete your meal plan, depending on how many meals you would like to plan for.

7 Review your plan, make sure the correct number of servings are selected for each recipe (e.g. if you're planning on having leftovers for lunches)

8 Assign your meals to which day you plan on cooking them using the "Schedule" feature within the app.

9 Use the integrated grocery list within the Mealime app to either shop in person, order online, or order for curbside pickup.

MEALIME TIP: Before you shop, customize your grocery list however you like by adding additional personal ingredients and crossing off any items you already have on your list.

mealime