# Protein 101: What it is, and why it matters to you (and your kidneys) 

## What is protein?

Protein is a macronutrient made up of building blocks called amino acids. There are 20 different amino acids -9 of which are considered essential, meaning our bodies cannot synthesize them and we must consume them through food or in the form of a supplement.

## Why is protein important?

Aside from water, protein is one of the main components of our bodies. Protein makes up our muscles, bones, hair, skin, and nails. It helps our organs function properly, and is important for building muscle and supporting immunity. Protein performs many other functions in the body, and supports overall health and wellness.

## What foods have protein?

Animal products are the main sources of complete protein, meaning they contain all 9 essential amino acids. Eggs, chicken, pork, and beef are some examples of high biological value protein foods, which means that they are made of at least $50 \%$ easily-absorbed protein. Tuna and other low-fat fish are also great sources of protein, and are high in omega-3 fatty acids and other important vitamins and minerals. Dairy products, including yogurt and cheese, provide both whey and casein protein.


Plant-based protein sources include: beans, nuts, soy (and tofu), peas, brown rice, chickpeas, and more. Quinoa is the only complete vegan protein! All other plant-based proteins only contain some of the essential amino acids, so must be combined to provide a complete protein. Some good combinations include: rice and beans, peanut butter with whole wheat bread, hummus and pita, and more.

## How much protein do I need?

The recommended daily allowance (or Dietary Reference Intake "DRI") of protein is .36 grams of protein per pound of body weight (or 0.8 grams per kilogram). As a general rule of thumb, you should aim to include a protein source in each meal of the day (breakfast, lunch and dinner) to ensure that you are meeting your daily protein needs. Follow the recommended "My Plate" method from the USDA (an update to the traditional "Food Pyramid"): make $1 / 2$ of your plate fruits/ vegetables, $1 / 4$ (lean) protein and $1 / 4$ grains (aim to make half of your grains whole). Many conditions can increase one's daily protein needs, including cancer, surgery recovery, end stage kidney disease, and more.

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## What are my protein needs if I'm on dialysis?

Dialysis patients have increased protein needs to make up for the protein losses during dialysis. Ensuring adequate protein intake when on dialysis is a critical part of patient success. Higher levels of albumin (a blood protein synthesized by the liver) are correlated with better outcomes and decreased risk of mortality for end-stage renal patients. Monthly measurement of albumin levels will help your care team advise on your diet needs. It can be a challenge to navigate your diet restrictions when on dialysis and still make sure you're getting enough protein. Work closely with your renal dietitian to create a plan that works for you.


## What are some ways I can incorporate protein at each meal?

Try eggs with breakfast, oatmeal, Greek yogurt, or peanut butter on toast. At lunch, add a hard-boiled egg, grilled chicken breast, or a serving of tuna to a salad; or make a sandwich with hummus, cheese, and/or turkey. At dinner, try beans and rice, salmon, or lean beef made into a burger or meatballs.


#### Abstract

What about protein supplements? There are lots of supplement options on the market for people looking to increase their protein intake, or those who may struggle to meet their protein needs with food alone. Not all protein supplements are equal though, so a little research can go a long way. Take a look at the source of protein (i.e. whey, collagen, soy, etc.) as well as other nutritional information in the supplement. Check if it is loaded with sugar or carbohydrates. How many calories or grams of fat per serving does it have? Are there artificial ingredients or sweeteners? All of these should be taken into consideration to ensure you are making good nutrition decisions. Speak to your dietitian about what options are best for you.


## About Vidafuel Wellness Protein Drinks

A collaborative effort between patients, dietitians and physicians brought Vidafuel Wellness Protein to life. It is a tasty, low-volume, high-protein drink that contains all 9 essential amino acids. The Wellness Protein Drink is a blend of whey and high-quality collagen protein, and contains no artificial colors or sweeteners. It also has only 4 g of sugar (carbohydrate), in the form of fructose, which is an easily digestible, natural form of sugar.

Our Wellness Protein Drink is available in two delicious flavors: Citrus Burst or Berry Delight. While they both taste great on their own, you can also mix them into a drink of your choice to complement the flavor (try Citrus Burst with almond milk and enjoy the taste of a creamsicle; or mix Berry Delight with pineapple juice for a tropical delight!). Visit www.vidafuel.com to see our kidney-friendly products.

