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Protein Supplements Primer

Getting enough high-quality protein - and getting while your muscles are most in need of it - is important to an after 40 babe who wants to keep the best bod and active life as possible.

Getting the majority of your protein needs met from whole foods, ideally a mixture of animal and plant sources. But you have to eat a lot of steak and salmon, or huge amounts of beans, rice, and quinoa to include plant only proteins.

Protein supplements are convenient and economical and many taste good as well. (You do have to watch for sugars and artificial sweeteners. Limit to 2-3 grams of sugar per serving if possible and use of stevia or allulose if there's an artificial sweetener used).

There are a lot of terms to consider on the protein supplement shelves these days. Product labels can be confusing. There is a difference in the quality of the products that makes it worth your research. You need to know a couple key terms to get you started in the right direction. If you're choosing protein from plant-based products there are a couple keys to making that an optimal choice too. Last, collagen is awesome for hair, skin, nails, bone and gut. But not for muscle. If you're counting collagen as protein toward muscle needs you may come up short in lean mass and strength support.

Dairy Proteins – Often Cause Digestive Distress for Women in Midlife+

Whey or Casein Concentrate: This is the cheapest form of protein supplement. It's only about 80% protein so it is fatter and carbs for "fillers." It is harder to mix and doesn't dissolve as well as higher-quality options, but it still offers muscle-building benefits.

Isolate: This is more processed - removing the fat and carbs - with 90-95% protein and it dissolves much better.

Hydrosylate or Hydrolyzed protein: This option has been broken down into smaller, more easily absorbed parts and gets into muscles faster. Some hydrolyzed protein is actually not dairy and is easier for midlife women to digest.

Micellar casein or isolated casein: This expensive option is easy-to-mix and is almost pure casein - the slower-acting protein that is most beneficial as a protein used at bedtime or as a meal replacement (not recommended if whole food is readily available).

Milk protein: 80% casein and 20% whey. High-sensitive food.

Egg white protein: An excellent high-quality protein, often higher in price compared to others. May say "instantized egg albumin" on the label. Egg is a high food sensitive food considered and tested uniquely from dairy (milk, cheese, and yogurt items).

"Proprietary Blend": Buyer-beware - companies don't have to disclose what mixture of whey, casein, and "other" ingredients they use.

Plant Proteins

Soy: High quality protein with all the amino acids needed for muscle growth. If you're worried about including soy due to effect on estrogen, know that most of the soy isoflavones causing the interaction with human hormones have been removed from soy isolate. However, soy is still considered to be an obesogenic, goitrogenic, and estrogenic. If you have hot flashes, night sweats and other menopause symptoms, remove and test it.

Hemp: It has all the essential amino acids but is low in leucine - the most important aa for protein synthesis. In other words, if you're taking the protein to reach amounts necessary to keep muscles this particular protein source doesn't give you the boost you want. It does have good fiber and healthy fat.

Brown rice: Also low in leucine but does have other great benefits. Just know that this is a low quality protein source and does include carbs which needs to be considered with your energy needs.

Yellow pea: May be helpful in reducing appetite. It is lower in leucine.

Plant-based protein blend: These products mix different plant sources of protein to provide a protein with the right dose of leucine. You may be able to do the same with careful consideration at meals or as you create a smoothie.

Plant-based proteins generally have a more grainy or chalky texture and few have a great taste by themselves. Flipping 50 Plant Power is fortunately one of them! But if you're "texture" sensitive you do want to consider how you consume it.

Essential and Branch Chain Amino Acids
The essential amino acids leucine, isoleucine, and valine, and leucine in particular - are more important than the other 17 (20 total) amino acids in assisting protein synthesis, muscle growth and repair. It takes two-to-three grams of leucine for maximum protein synthesis per meal. Per day 5 grams of leucine is recommended. Meals of eggs, fish, meat, or a smoothie made with carefully selected protein powder can do that.

The chart below shows a comparison of approximately **how many grams of each of the following proteins you need to get 2.5 grams leucine**.

Whey*	23
Egg*	29
Soy*	31
Rice	32
Pea	39
Hemp	100

Hydro beef (Paleo Power) falls between Whey and Plant Power (pea) for the amount necessary. Whey is of course, dairy, so if you're sensitive to dairy you want to eliminate it. It's best ONLY pre or post exercise if you do use it.

It's easy to see why Whey protein is the most popular type of protein. It's convenient,

gives you exactly what you want to boost results in each serving. However, there are several things to consider first.

Whey protein - it is dairy- can make you store fat if it spikes your insulin levels. It's easy to absorb which is fine for those extremely active and doing several tough workouts a week in need of rapid repair or at risk for depletion if they don't recover.

But when that rapidly absorbed protein is consumed when you're NOT working out, it will elevate blood sugar – the exact opposite of what you want!

If you choose whey, follow guidelines for the highest quality protein powder, and you'll have less chance you'll have a problem. Test your sensitivity to dairy and to sugars prior to investing in whey. It's appropriate pre and post exercise if you do tolerate it but not at other times.

Read the ingredients. If you can't pronounce it, or it includes soy or sugars (often ending in -ose), it's not actually a healthy option.

If you:

- ☐ Struggle to consume enough animal protein
- ☐ Are vegetarian

….Supplementing with the following can be helpful, even necessary to reach the protein recommendations for lean muscle mass and strength to preserve muscle losses that lead to sarcopenia, falls, fractions and frailty.

For now, muscle loss can lead to weight loss resistance and fat gain. Protein is the easiest, often referred to as "low hanging fruit" addition to a diet to support fat loss.

Simply increasing the amount of protein, without changing calories, can have a significant impact on fat loss and body composition. Science reported and primary science conducted by Bill Phillips, PhD.

Essential Amino Acids in powder (this is like a pre or post workout drink and is generally not something you'd want to add to a smoothie as amino acids don't taste "good") or capsule/tab format are. If you're not consuming enough protein, THIS is a crucial step to getting ALL the essential aminos.

Branch Chain Amino Acids (BCAAs) Get a lot of "hype" in the body building world. Recent review of literature show BCAAs do nothing more for muscle if you're consuming a varied high quality protein diet. If you don't get the adequate protein consumption, then supplementation is a good idea. But this is not where to start. Begin with the full EAAs so your body has ALL it needs rather than these three isolated EAA.

Your Protein Plan

Food first: high quality animal protein is the best source for the fewest calories
Protein supplements next: in the form of

- ☐ Powders (as in for shakes – not "pre-made shakes")
- ☐ EAAs
- ☐ And only after all those would you consider adding BCAAs.

Most won't need this at all. Not even body builders.

After you complete your food log and know what you're consuming daily, aim for your weight in pounds in grams of protein. If that is a considerable gap, aim to increase slowly by adding 2-3 grams per meal. Protein is filling so you may find you can't increase dramatically.

Digestive Support

Older adults have a fraction of the stomach acid required to break down proteins in foods. If you struggle with gas, bloating, quick fullness, chances are you may need support. Try Betaine HCL with or without digestive enzymes:
Protease – helps breakdown proteins
Lipase – helps with fat breakdown
Amylase – helps with carbohydrate breakdown

An App may be helpful and if you want to use one, you might try Macros. Consider reviewing your Food (NAP log) to go a little more manual and look at what you DID consume for protein and ways to boost it.

MORNING… is the absolute MOST important time to go high protein (and low carb).