



# PURE MUSCLE

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Losing weight can be great. But not if that poundage comes from muscle loss.

# BUILD. FIRM. TONE.



Nutrition Facts	
30 Servings Per Container	
Serving Size	1 Scoop (8g)
Amount Per Serving	
<b>Calories</b>	<b>47</b>
	% Daily Value
Total Fat	3.5g 4%
Saturated Fat	1g 5%
Trans Fat	0g
Cholesterol	125mg 40%
Sodium	<1%
Total Carbohydrate	1.7g 1%
Dietary Fiber	0g
Total Sugars	1g
Includes 1g Added Sugar	2%
Protein	2.2g 4%
Fortetropin® (Fertilized Egg Yolk Powder)	6600mg †
Vitamin D	0.8mcg 4%
Calcium	17mg 1%
Iron	0.4mg 2%
Potassium	15mg <1%

Fortetropin® helps your body utilize protein more

efficiently to build more lean muscle.



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# In This Booklet ...

**Can You Gain Muscle While Losing Weight?  
Summary of Fortetropin® Research**



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By K. Aleisha Fetters

## Losing weight can be great. But not if that poundage comes from muscle loss.

Unfortunately, a lot of the time, when people lose weight, they wind up with a lot less muscle than they started out with. Some even find their body fat percentages increasing.

Why? Because when you consume fewer calories than you burn every day – a prerequisite for losing weight – you tell your body to put your muscle health on the back burner. "Lower calorie diets decrease the intracellular signaling necessary for your body to synthesize new muscle proteins," explains Atlanta-based board-certified sports dietitian and certified strength and conditioning specialist Marie Spano. She also notes that, when dieting, muscle tissue may be less sensitive to the protein you eat. As a result, muscle is less likely to use any amino acids (from protein) floating through your bloodstream to strengthen your muscles.

Unfortunately, muscles cells naturally shed proteins every day, ready for your body to replace them with new healthy ones. So, when the new ones don't show up, you lose muscle – sometimes drastically.

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Since muscle is the single greatest determiner of your metabolic rate – how many calories you burn each and every day – this muscle loss largely explains why so many people struggle to keep weight off once they lose it. Their metabolism drops. For instance, that's why research found that people who had lost weight on The Biggest Loser had to eat as many as 800 fewer calories a day to maintain their weight loss compared to people of similar weights. Their metabolisms had slowed that much.

On the flip side, though, building muscle while you lose weight does the exact opposite – stoking your metabolism and making it easier to hit your fat-loss goals and maintain them. Plus, muscle increases your strength, reduces the risk of injury and can improve your overall health.

So, how can you build muscle while still losing fat – when biology is working completely against you? By following these seven expert-approved strategies.

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## 1. Eat More Protein at Every Meal

In one 2016 study published in *The American Journal of Clinical Nutrition*, of men following a program that consisted of both diet and exercise, men who followed a low-calorie diet that was high in protein for four weeks lost 10.56 pounds of fat while gaining 2.64 pounds of lean muscle. Those who followed a diet with the same amount of calories, but less protein, only lost 7.7 pounds of fat and gained less than a quarter pound of muscle.

To gain muscle while losing fat, a review published in *Sports Medicine* recommends consuming between 2.3 to 3.1 grams of protein per kilogram of your bodyweight (1.09 to 1.41 grams of protein per pound of your bodyweight). "In addition, this protein intake should be spaced out evenly throughout the day," Spano says. As a general rule, aim to include at least 25 to 30 grams of protein in every meal – and even slightly more if you are vegetarian or vegan.

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## 2. Lose Weight Slowly

While it can be tempting to try to lose as much weight as quickly as possible, drastic drops in weight tend to be the result of losing not just fat, but also muscle, says registered dietitian Jim White, spokesman for the Academy of Nutrition and Dietetics and owner of Jim White Fitness & Nutrition Studios in Virginia. For instance, in one Obesity study, when people followed an extremely low-calorie diet, 18 percent of their weight lost was from muscle. When people stuck to a more moderate approach, that percentage dropped to 7.7.

Your goal? Lose no more than 1 to 2 pounds per week, according to White. While every person will need to cut calories and/or increase their activity levels slightly differently to lose weight at this rate, reducing caloric intake by 500 calories per day is a good place to start.

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### 3. Strength Train at Least Three Times Per Week

A lot of people who try to lose weight ramp up their cardiovascular activity. This can be beneficial but not if it replaces weight training," White says. Case in point: In one 2015 Harvard School of Public Health study of 10,500 adults, those who performed strength training gained less abdominal fat (while building more muscle) over a period of 12 years compared to those who spent the same amount of time dedicated to cardio.

"We need to include at least two days of weight training a week to maintain existing muscle mass and three or more times a week to build muscle," White says. Focus on fitting in these workouts first and then you can start to think about adding the right cardio workouts to your routine.

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#### **4. Keep Your Cardio Workouts Short and Sweet**

When it comes to getting the most fat loss and muscle gain out of your cardiovascular workouts, it's best to focus on high-intensity interval exercises such as repeated sprints on the treadmill, elliptical or bike. These workouts will burn fat while building muscle, whereas low- to moderate-intensity steady-state cardio burns both muscle and fat, White says.

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## 5. Give Your Muscles a Break

"Most people think more is better. When it comes to building muscle this is not necessarily true," White says.

"Muscles need rest to grow." How much time? Although the exact time will differ slightly from person to person and workout to workout (which is why you need to listen to your body!), one Medicine and Science in Sports and Exercise meta-analysis determined that for optimal strength development, it's best to rest a given muscle group for one to two days before working it again through strength training.

So, if you perform an intense lower-body strength routine on Monday, wait until at least Wednesday to target your lower body again. You can always perform upper-body lifts on Tuesday. Then, every week, schedule at least one to two days of full rest from structured exercise.

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## 6. Be Patient

This might be the hardest tip of all, but it's important to keep in mind, especially as you progress through your "burn fat and build muscle" plan. That's because, while you may notice yourself making great gains to start with, they will naturally slow over time. "It becomes progressively more difficult to increase muscle while losing fat as you become more trained and get leaner," says certified strength and conditioning specialist Brad Schoenfeld, a board member for the National Strength and Conditioning Association.

It's just how the human body works: The more excess fat we have to lose, the easier it is to lose 5 pounds of fat. The more muscle we need to gain, the easier it is to gain 5 pounds of muscle. As you get closer to your goal, expect to see more subtle changes in your fat and muscle levels, and don't get discouraged.

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## **7. Fortetropin®**

**Fortetropin® helps your body utilize protein more efficiently to build more lean muscle.**

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# Summary of Fortetropin® Research

## Human Clinical Research:

### *Completed Research:*

- University of Tampa: Fortetropin increased muscle size, mass and strength in young athletes [1].
- University of California, Berkeley: Fortetropin increased rate of muscle protein synthesis by 18% in older adults [2].

### *Ongoing Research:*

- McMaster University: Impact of Fortetropin on atrophy of disuse in young men.

## Veterinary Clinical Research:

### *Completed Research:*

- Kansas State University: Fortetropin prevented atrophy of disuse and improved recovery from TPLO surgery [3].
- Kansas State University: Fortetropin resulted in decreased ‘Liverpool Osteoarthritis in Dogs’ (LOAD) scores in geriatric dogs [4].
- University of Tampa: Fortetropin acts by upregulating mTOR pathway (promoting muscle growth), downregulating Ubiquitin pathway (slowing muscle degradation), and lowering myostatin levels (promoting muscle growth) [1].

### *Ongoing Research:*

- University of Florida: Dosing study to evaluate impact of Fortetropin on safety and tolerability in cats.
- Animal Medical Center, NYC: Impact of Fortetropin on serum myostatin concentration in dogs.

## References:

1. Sharp, Matthew H., et al. "The effects of Fortetropin supplementation on body composition, strength, and power in humans and mechanism of action in a rodent model." *Journal of the American College of Nutrition* 35.8 (2016): 679-691.
2. Evans, William, et al. "Effects of Fortetropin® on the rate of muscle protein synthesis in older men and women: a randomized, double-blinded, placebo-controlled study." *The Journals of Gerontology: Series A* (2020).
3. White, Dana A., et al. "Fortetropin inhibits disuse muscle atrophy in dogs after tibial plateau leveling osteotomy." *Plos one* 15.4 (2020): e0231306.
4. Harkin, Kenneth R, et al. *Manuscript in preparation* (2020).

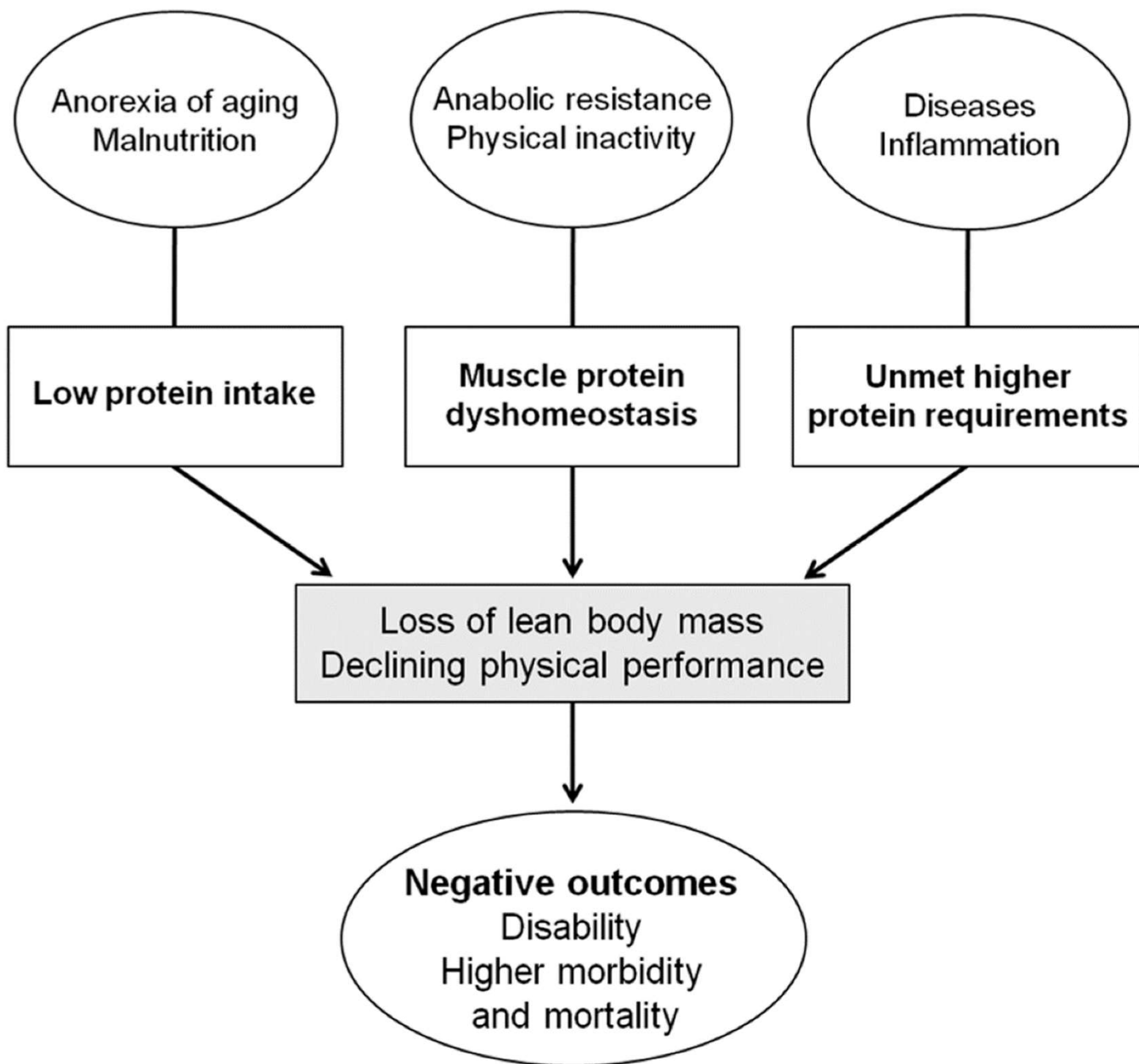
# Older Adults and Protein Intake: Prioritizing Muscle Health

By Neerav D. Padliya, Ph.D., Vice President, Research & Development

## Older Adults Have Higher Protein Requirements

In order to maintain muscle health as adults age, it is vital that older adults consume enough protein. But how much is enough? The current recommended daily allowance (RDA) for protein is 0.8 g/kg/day but this is likely inadequate to maintain muscle health as adults age [1,2]. Yet according to a study by Kerstetter et al. [3] it was reported that 32% to 41% of women and 22% to 38% of men beyond the age of 50 years failed to meet the RDA of 0.8 g/kg/day. Due to the sedentary lifestyles that many older adults live, they face the risk of muscle protein dyshomeostasis [1]. It is well understood that inflammation plays a major role in muscle loss [4,5] and unfortunately, many older adults suffer from conditions that are associated with an elevated inflammatory state such as obesity.

Figure 1: Protein intake requirements increase as adults age. Reproduced from [1].

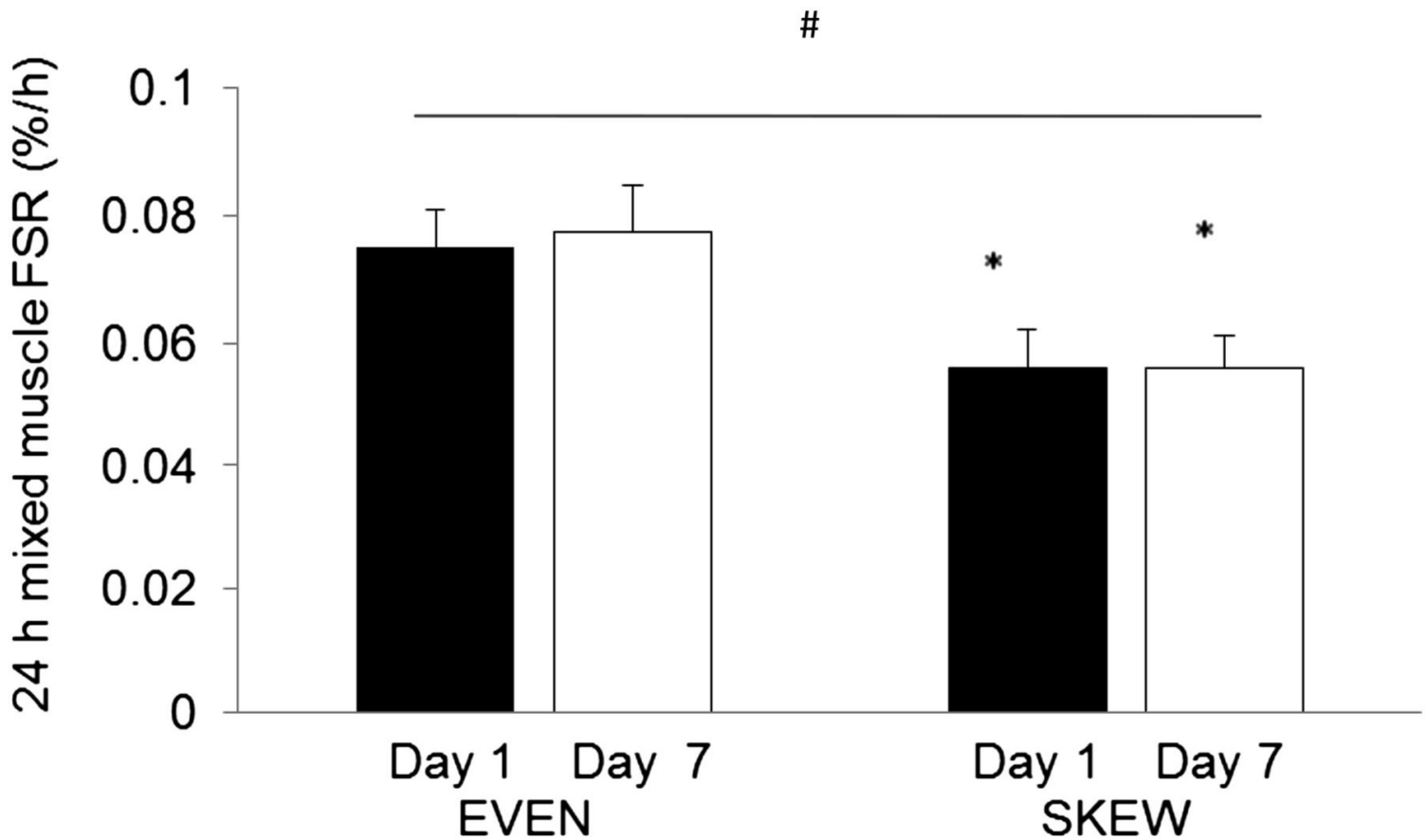


Because of these three reasons (Figure 1), older adults have much higher protein requirements and it has been recommended that they consume between 1.0 – 1.5 g/kg/day of protein [6].

### Spreading Protein Intake Out Throughout The Day To Maximize Muscle Protein Synthesis:

In 2014, Researchers at the University of Texas Medical Branch, Galveston conducted a randomized, 7-day crossover clinical study with a 30 day washout period to study the impact of protein intake distribution on mixed muscle protein fractional synthesis rate in adults between 25 to 55 years of age [7]. Their approach involved a stable-isotope labeling strategy and analysis of muscle biopsy samples. When subjects were in the EVEN phase of the study, they consumed ~30 grams of protein during breakfast, lunch and dinner. During the SKEW phase of the study, subjects consumed ~11 grams, ~16 grams and ~63 grams of protein for breakfast, lunch and dinner. It was demonstrated that the 24 hour rate of muscle protein synthesis was ~25% higher when protein was consumed evenly throughout the day rather than in a skewed pattern with the majority of protein being consumed at dinner (Figure 2).

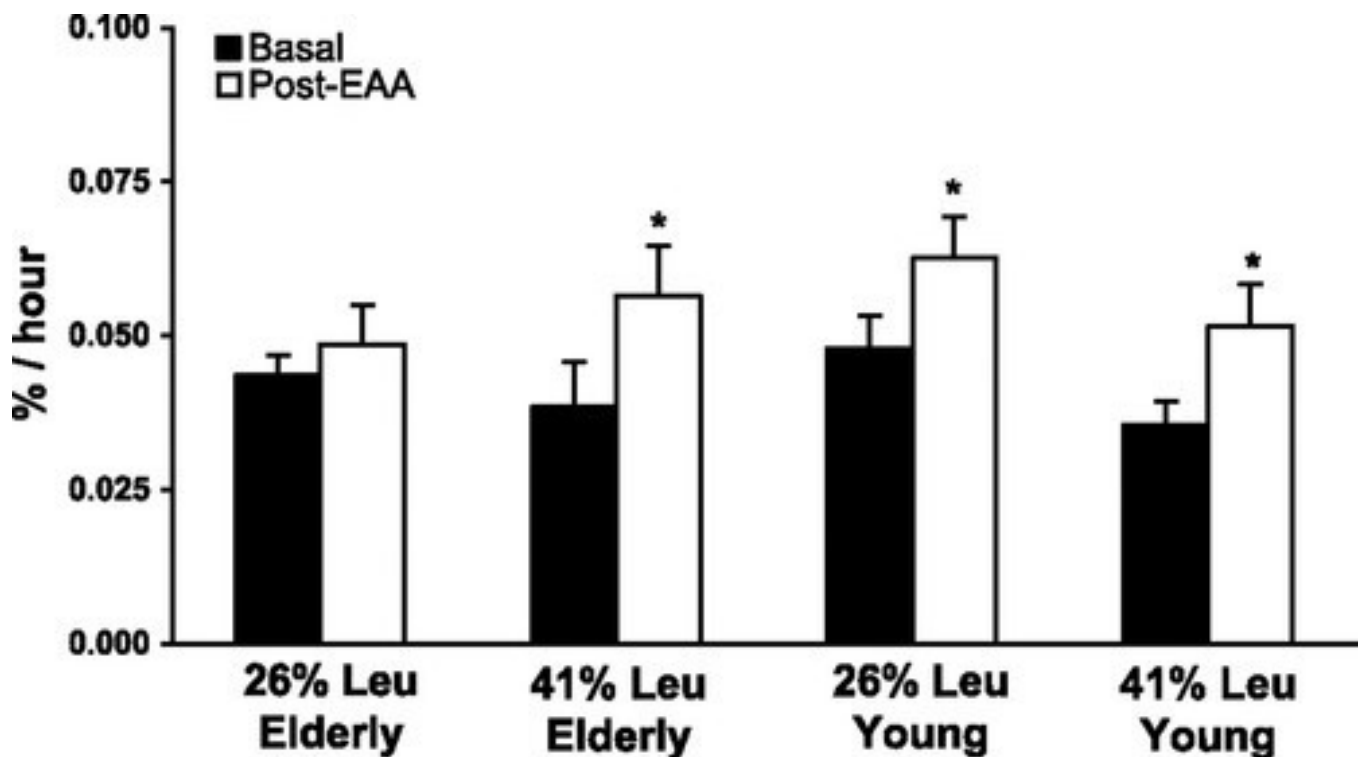
Figure 2: 24-hour mixed muscle protein fractional synthesis rates (FSRs) in healthy adults on days 1 and 7 after consuming diets with an EVEN or SKEW protein intake distribution. Reproduced from [7].



### Proteins Rich in Leucine Effectively Stimulate Muscle Protein Synthesis

A clinical study published in 2006 involving young and elderly men and women demonstrated that leucine is very effective in terms of stimulating muscle protein synthesis in elderly human subjects. Four groups of adults (2 elderly groups, 2 young groups) were studied before and after they were given 6.7 grams of essential amino acids (EAAs) that contained either 1.7 grams Leu (26% Leu) or 2.8 grams Leu (41% Leu). The results presented in Figure 3 clearly illustrate that increased consumption of leucine is very effective in terms of stimulating muscle protein synthesis, particularly for older adults.

Figure 3: Fractional synthetic rate of mixed muscle protein in the basal state (Basal) and after the ingestion of 6.7 g of EAA (Post-EAA) containing either 26% or 41% Leucine. Reproduced from [8].





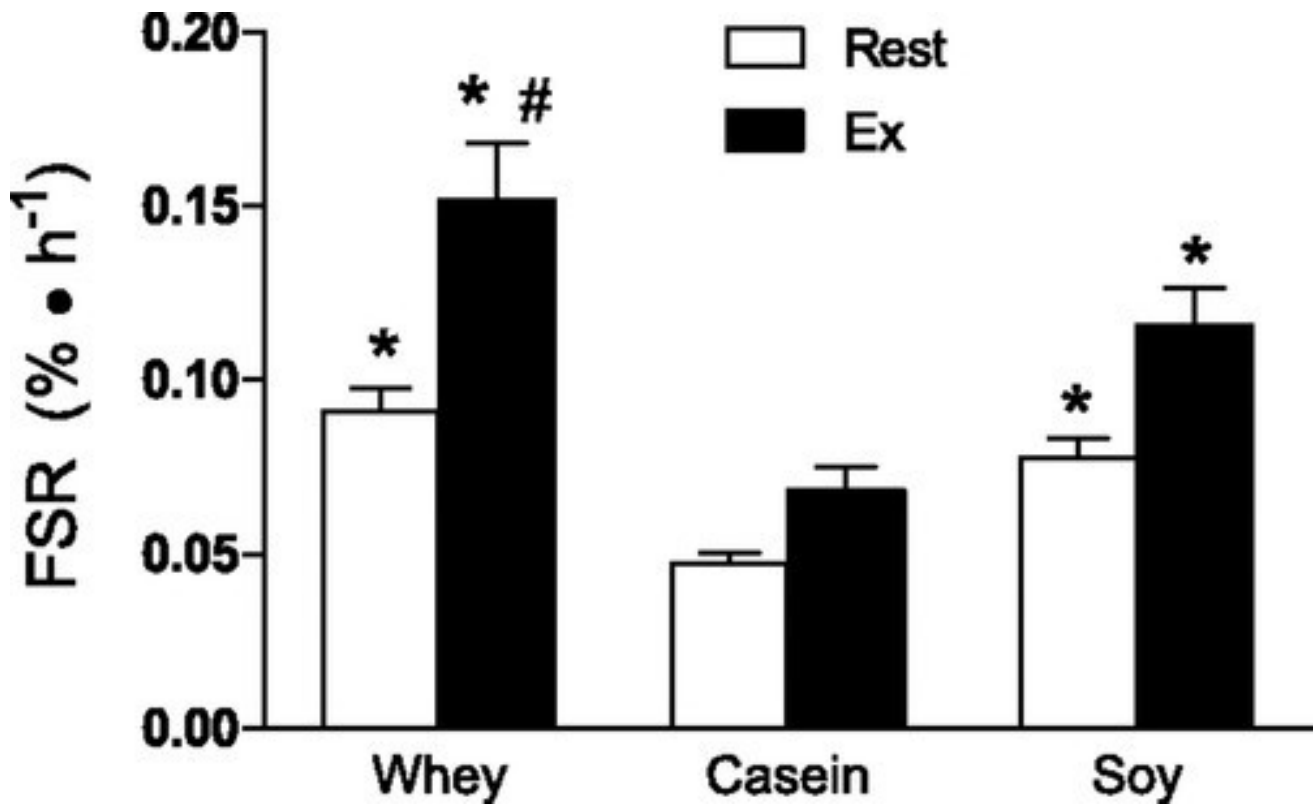


Figure 4: Mixed muscle protein fractional synthetic rate (FSR) after ingestion of whey hydrolysate, casein, or soy protein at rest and after resistance exercise. Reproduced from [9].

Researchers at McMaster University, Canada studied the impact of essential amino acids (10 grams) given as either whey hydrolysate, micellar casein, or soy protein isolate in young healthy men after performing a bout of resistance training exercise [9]. It is evident that whey protein had a greater impact on stimulating muscle protein synthesis when compared with soy and casein (Figure 4). The authors suggested that these differences could be related to increased leucine content in whey protein along with differences in digestibility.

#### MYOS Physician Muscle Health Formula: Advanced Nutrition For Muscle Health

MYOS Physician Muscle Health Formula® is an advanced nutrition program comprised of Fortetropin®, natural vanilla flavor and dextrose.

Fortetropin® is an advanced nutrition product made from fertilized chicken egg yolk using a patented, low temperature manufacturing process [10,11] that helps to better retain the natural bioactivity of the proteins, peptides and lipids that are found to be present within fertilized, chicken egg yolk while destroying harmful pathogens. In human clinical studies, Fortetropin® has been shown to increase the rate of muscle protein synthesis [12] and lead to gains in muscle mass and strength [13]. A report that Fortetropin® reduces muscle disuse atrophy in dogs undergoing a common veterinary orthopedic procedure [14] inspired a human clinical trial on muscle disuse atrophy, initiated in early 2020.

A single serving of Fortetropin® contains very little protein – only 2 grams to be exact. Yet adding Fortetropin® to a healthy diet that provides enough protein can increase muscle protein synthesis in older adults (60-75 years old) by ~15%

#### References:

1. Landi, Francesco, et al. "Protein intake and muscle health in old age: from biological plausibility to clinical evidence." *Nutrients* 8.5 (2016): 295.
2. Wolfe, Robert R., and Sharon L. Miller. "The recommended dietary allowance of protein: a misunderstood concept." *Jama* 299.24 (2008): 2891-2893.
3. Kerstetter, Jane E., Kimberly O. O'Brien, and Karl L. Insogna. "Low protein intake: the impact on calcium and bone homeostasis in humans." *The Journal of nutrition* 133.3 (2003): 855S-861S.
4. Meng, Si-Jin, and Long-Jiang Yu. "Oxidative stress, molecular inflammation and sarcopenia." *International journal of molecular sciences* 11.4 (2010): 1509-1526.
5. Bano, Giulia, et al. "Inflammation and sarcopenia: A systematic review and metaanalysis." *Maturitas* 96 (2017): 10-15.
6. Morley, John E., et al. "Nutritional recommendations for the management of sarcopenia." *Journal of the American Medical Directors association* 11.6 (2010): 391-396.
7. Mamerow, Madonna M., et al. "Dietary protein distribution positively influences 24-h muscle protein synthesis in healthy adults." *The Journal of nutrition* 144.6 (2014): 876-880.
8. Katsanos, Christos S., et al. "A high proportion of leucine is required for optimal stimulation of the rate of muscle protein synthesis by essential amino acids in the elderly." *American Journal of Physiology-Endocrinology and Metabolism* 291.2 (2006): E381-E387.
9. Tang, Jason E., et al. "Ingestion of whey hydrolysate, casein, or soy protein isolate: effects on mixed muscle protein synthesis at rest and following resistance exercise in young men." *Journal of applied physiology* 107.3 (2009): 987-992.
10. Buxmann, Waldermar, et al. "Process for producing a composition for increasing muscle mass." S. Patent # 10,165,785, Issue Date: January 1, 2019.
11. Buxmann, Waldermar, et al. "Process for producing a composition containing active follistatin." S. Patent #8,815,320, Issue Date: August 26, 2014.



## Dietary Supplement

- 18% Increase in Rate of Muscle Protein Synthesis
- Gain up to 8 lbs of Lean Muscle in 12 weeks
- Decrease Myostatin to Aid in Muscle Growth
- All Natural

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# Nutrition Facts

30 Servings Per Container  
Serving Size 1 Scoop (8g)

Amount Per Serving		
<b>Calories</b>	<b>47</b>	
	<b>% Daily Value</b>	
<b>Total Fat</b>	3.5g	4%
<b>Saturated Fat</b>	1g	5%
<b>Trans Fat</b>	0g	
<b>Cholesterol</b>	125mg	40%
<b>Sodium</b>		<1%
<b>Total Carbohydrate</b>	1.7g	1%
<b>Dietary Fiber</b>	0g	
<b>Total Sugars</b>	1g	
<b>Includes 1g Added Sugar</b>		2%
<b>Protein</b>	2.2g	4%
<b>Fortetropin® (Fertilized Egg Yolk Powder)</b>	6600mg	†
<b>Vitamin D</b>	0.8mcg	4%
<b>Calcium</b>	17mg	1%
<b>Iron</b>	0.4mg	2%
<b>Potassium</b>	15mg	<1%

\*Percent Daily Values (DV) are based on a 2,000 calorie diet.  
† Daily value (DV) not established.

**Fortetropin** is the first natural ingredient clinically shown to reduce serum myostatin levels to promote muscle growth. ... PURE MUSCLE Formula helps maintain muscle health and prevent sarcopenia, age related muscle loss, and loss of muscle regenerative capacity

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