

# Agel PRO

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Agel™ PRO is one of Agel's newest products, complementing an already compelling product line for health and vitality. PRO is a balanced protein gel that serves a wide variety of nutrition needs for a large number of people. Most people associate protein products with body builders or severe athletes. But, on the contrary, this balanced protein gel can be beneficial to practically everybody. In effect, it is useful for athletes who want to engage in severe muscle building, for individuals concerned with weight management, or simply for anybody who wants a mini-meal replacement or in-between meal snack.

Agel PRO contains 20 grams of protein in 175 calories, and it is balanced with medium chain triglycerides and fructose to help build muscle and maintain overall body conditioning, all from an inexpensive and easily carried package that actually tastes great.

## Agel PRO Benefits

### Muscle Building

Effective muscle protein synthesis requires an adequate supply of a wide variety of amino acids. And, the more aggressive the muscle building or regeneration you are engaged in, the more of a high quality protein source you will need. In PRO, the protein source is an ultra-filtered whey protein isolate, the highest quality protein known. This ultra-filtration technology creates a protein that is complete (containing all nine essential amino acids, plus several others), easy to digest, and 90 percent pure. Whey isolate is a rich source of the critical amino acids that give athletes an edge by metabolizing directly into muscle tissue. It also is an excellent source of leucine, an essential amino acid that helps build lean muscle mass while promoting fat loss.

### Weight Management

In the last two decades, there has been an increasing awareness of the long-term health benefits of achieving an optimal body composition (more muscle, less fat). Each year, experts identify more and more disease conditions that are related to being significantly overweight. In an effort to thwart this serious health threat, many health professionals and government agencies are spending hundreds of millions of dollars every year to educate us about the importance of decreasing our excessive consumption of high (but empty) calorie foods, and of increasing the amount of our daily physical activity. We are squarely faced with the global issue of a population that is becoming increasingly sedentary, overfed, and undernourished.

So...what do we do about this serious and problematic global health issue? Countless individuals are striving daily to find their own solution to losing those extra pounds, but the "battle of the bulge" can be a very frustrating problem for many. Researchers across the world have been searching for that "magic formula" that will just melt away the excess fat, but most of the proposed solutions usually contain some sort of artificial stimulant or appetite suppressant such as the infamous phen-phen, or the more commonly used ingredients such as caffeine and ephedrine. These ingredients have resulted in some

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health related problems that are as life-threatening as the extra body fat itself. In fact, these three popular ingredients have resulted in some significant life-threatening conditions, such as heart valve damage, heart attacks, and strokes. In reality, the achievement of an optimal body composition requires a series of proactive lifestyle choices. It requires obedience to a simple law of nature...balancing the quantity and quality of calories consumed with the quantity of calories burned. In simple terms, we have to eat fewer calories, eat smarter, and move more.

What exactly does it mean to be eating smarter and fewer calories? Why all the “mumbo jumbo?” Calories are a way of measuring the energy potential of a food. Certain foods produce more energy than others when metabolized or “burned” by your cells. Food has three basic components; proteins, carbohydrates and fats, and all three of these components play an important role in sustaining your cellular activities. In addition, your body metabolizes each of these components differently. Proteins are broken down into smaller building blocks called amino acids, carbohydrates are broken down into energy-rich simple sugars, and fats are broken down into smaller fatty acids. All of these are subsequently taken up into your body to be used as energy or to be incorporated into the appropriate cellular structures. Because each of these smaller components can be turned into energy, they represent calories. And, in very simple terms, if you consume more calories (proteins, carbohydrates, fats) than your body needs, your body is genetically programmed to store those calories as fat for later use as a means of preparing itself for times of “famine.” As you are likely aware, your body has a very efficient way of converting extra calories into stored body fat, especially if you are not getting enough activity or exercise during the day.

So, let’s talk about how calories go out. We burn calories at rest, during daily living activity, and when we exercise. Each of us has a basal metabolic rate (BMR). BMR is the minimum caloric requirement needed to sustain life in a resting individual. This is the amount of energy your body would burn if you slept all day (24 hours). Therefore, while you are at rest, your body has a basic energy requirement or BMR that is governed by many factors, but mostly based on your individual body composition (fat to lean-mass ratio). Simply stated, muscle burns more calories than fat does even while you are at rest. So if your lean-mass ratio is higher, then your metabolic rate is generally higher. If your fat ratio is higher, then your metabolic rate is lower and you don’t burn as many calories at rest. The key to success in burning more calories at rest is to have a higher lean mass ratio, which can be accomplished through resistance or strength training exercises and through optimal nutrition. Therefore, the optimal body composition, very generally stated, is to have a lower body fat content and more muscle content. In fact, according to the some nutrition experts, the optimum body fat content is between 5%-15% for males and between 12%-20% for females. In summary, a higher ratio of muscle mass results in a higher metabolism, whereas a higher ratio of fat mass results in the opposite. It is important to note that some body fat is not all bad. In fact, you need body fat for a variety of important physiological reasons. But, in excess amounts, it can be problematic. This is because with more body fat, your body needs fewer calories to function, and therefore you store more of your food calories as fat, thus perpetuating the original problem.

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But, what if there was a way to facilitate, from a nutritional standpoint, this seemingly simple, yet sometimes difficult process of balancing the calories in with calories out in order to achieve optimal body composition? In contrast to the harmful stimulants described above, researchers have identified supplemental methods that can be helpful in this process. They have identified naturally occurring compounds that, when combined with physical activity, can help you to increase lean muscle mass and consequently help your body burn calories more efficiently. With more lean muscle mass, you have a higher BMR, a more efficient metabolism, and improved body composition.

Unfortunately, many people who are trying to manage their weight are just counting total calories. While that is really the essence of weight management and optimal body composition, there is more and more research suggesting that simply counting calories is not the entire formula. It is perhaps even more important to consume more frequent, smaller servings of a meal or snack that have a balance of calories from all three macronutrient sources: protein, carbohydrate, and fat. Unfortunately, many diets and weight management programs overemphasize a single macronutrient as being the only “solution.” But, the true solution is balance, and getting that balance throughout the day. Just as you need to have an optimal lean mass to fat ratio in your body composition, you also need to have a favorable balance of carbohydrates, fats and proteins in your meals and snacks. This can get rather tricky, but nonetheless is very important to consider.

How does this all work? Every time you ingest food, you send numerous signals to your body. A meal with high levels of carbohydrates signals the secretion of insulin, a fat storage hormone (messenger). At the same time, the carbohydrates are broken down into the simple sugars, and a whole mechanism of enzymes and cellular processes are activated in an effort to generate immediate energy. Additionally, some of the sugars are stored for later use in the form of glycogen, a rapid release form of energy. However, those sugars that are not needed for immediate energy production or for glycogen storage are then converted to fat, your body’s long-term food storage system. Thus, excess consumption of carbohydrates will lead to excessive fat storage.

A meal with a higher protein ratio, on the other hand, signals the secretion of glucagon, which can be considered the opposite of insulin – it signals your body to burn fat instead. In addition, protein breaks down into amino acids, the primary building block of enzymes and muscles. These amino acids stimulate muscle generation and repair, and they accelerate metabolism. Proteins are essential to virtually every aspect of cellular activity, and are responsible for the integrity and proper function of almost all body systems. Needless to say, we all need protein in sufficient quantities every day in our diet. At a minimum, it is recommended by nutritional experts that you get 1.0 to 1.5 grams of protein in your diet for every kilogram of body weight (.45 gm to .68 gm per pound). And, with physical exercise, stress, and sickness, your dietary protein requirements are even higher.

Then there is dietary fat. By itself, fat doesn’t have much of an affect on either insulin or glucagon, but moderate amounts of fat in your diet are healthy and necessary. Fatty acids are essential to a myriad of cellular structures and processes, including cell membranes,

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joint fluids, brain matter, and hormones, just to name a few. And, in fact, you need about 25 to 30% of your daily caloric intake to come from healthy fats in your diet. Although fats are an essential part of your diet, if you take in too much fat (which is high in calories), you create an excess of calories needed for your metabolic needs, and this triggers insulin release, which then turns on fat storage. Once again, balance and moderation is essential.

By balancing the amounts of protein, carbohydrates and fats that you ingest with your meals and snacks, and by avoiding excess caloric intake, you are helping your body store less fat and build more muscle. This is how you obtain an optimal body composition.

## **Why Whey Isolate?**

Whey isolate is one of the finest sources of protein available for many different reasons. It is easy to digest. It contains only trace amounts of milk fat and lactose (less than 0.5%) making it easily digestible even for those with lactose intolerance. It contains over 90% pure protein. It is complete, in that it contains all nine essential amino acids, plus several additional ones including leucine, which plays a key role in building lean muscle mass and promoting fat loss (whey isolate has 50% more leucine than soy protein isolate.)<sup>7</sup> Furthermore, whey isolate has the highest known levels of branched chain amino acids (BCAA's) of any natural food source. BCAA's, unlike other amino acids, are metabolized directly in the muscle tissue (instead of being metabolized in the liver). Thus, they are the first to be used during periods of exercise and training.

## **Why Medium-Chain Triglycerides (MCT's)**

Of the fats that make up your diet, the ones that are the healthiest and most easily digested are the medium chain triglycerides (MCT's). In contrast, the long chain triglycerides (LCT's) that are also present in your food are much more difficult to digest and are more easily stored as body fat. Because MCTs are easily digested, rapidly absorbed, quickly metabolized, and readily converted to energy in the body, they are not as readily deposited as body fat. For these reasons, they have been used for many years in clinical nutritional formulas to help feed those with malabsorption syndromes. MCTs contain a high amount of lauric acid, the major fatty acid from the fat of the coconut. This fatty acid has been recognized for its unique properties including its antiviral, antibacterial, and antiprotozoal functions. Also in one clinical trial with overweight men, consumption of a diet rich in MCTs resulted in greater loss of fat perhaps due to increased energy expenditure and fat oxidation observed with MCT intake. MCTs may be considered as agents that potentially stimulate weight loss.

## **Mini-Meal Replacement**

Agel PRO can also be used as a mini-meal replacement or in-between meal snack. It is becoming increasingly clear that we should eat less in quantity for but more frequently. This alternative eating practice has many proven benefits over just eating 2-3 times per day, and ideally, you need to be eating 5-6 times per day. However, your meals and

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snacks should have fewer calories since you are eating more of them. In addition, in order to be most effective, you need to be eating meals and snacks that are balanced with the appropriate ratios of proteins, carbohydrates, and fats.

The following are just some of the many proven benefits provided by eating smaller but more frequent meals and snacks:

1. Lowered total cholesterol with improved HDL (good) to LDL (bad) ratio
2. Reduction in appetite by 27%
3. Weight loss while sparing lean mass (muscle) - in other words, fat loss
4. Fewer insulin surges from better blood sugar control
5. More normal cortisol levels (lower) - helping in better body composition

Many of us are so busy in our day-to-day lives that we don't take the time to eat often enough. A convenient and balanced between-meal protein supplement could be the answer to help you eat less, more frequently.

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