dotFIT™ Pre/Post Workout Formula & Meal Replacement™

Goal

The Pre/Post Workout Formula & Meal Replacement (PPMR) formula is designed to support multiple sport and fitness goals. The unique formulation allows it to be used as desired for one or more of the following roles: 1) a meal replacement as needed for weight loss and/or weight maintenance; 2) meal or daily supplement for weight gain; 3) pre and post workout formula to enhance exercise induced results especially within the so called metabolic windows; 4) daily protein supplement to help meet the current higher protein recommendations. While each of the dotFIT powders have a more specific role (LeanMR - weight loss; WheySmooth – low calorie pre/ post workout and protein supplement and/or weight loss low carbohydrate (CHO) meal replacement (MR); FirstString – primarily for performance and/or muscle/ weight gain goals), PPMR is the only one of the dotFIT powders that may be used (as it exists in its native form) as universally as described. The unique taste of PPMR may also play role in its selection for any of its uses.

Rationale

PPMR, WheySmooth (WS) and FirstString (FS) use the identical protein blend and except for PPMR's flavoring, all other ingredients including CHO, fats, sweeteners, etc. are also the same (as described below). Therefore, the basic difference in PPMR is the CHO content to protein ratio per serving, which is ~1.7:1 (33-35 g CHO to 21 g protein in 240-250 calories per serving). FS, LeanMR and WS are 2.2:1, 1:1 and 0.3:1, respectively in order to help accomplish their primary goals described above. (The practitioner is referred to individual sections in the PDSRG for all individual product details). The unique CHO:P ratio but similar ingredients allow PPMR to be used for diverse goals. Additionally, a flavor preference may push a user to select PPMR for any of the four goals. For example, a person with primarily a weight loss goal may prefer the taste of PPMR over LeanMR and therefore "more happily" maintain its use throughout the goal period. The practitioner is referred to the following sections in the PDSRG for detailed referenced documents on the use of protein formulas such as the PPMR for each of the goals listed (sections also include protein mechanisms of action, requirements, safety, best sources, manufacturing, etc.):

- Weight loss refer to LeanMR and WheySmooth
- Muscle, weight gain and performance refer to FirstString including pre and post exercise supplementation for maximizing metabolic window activity
- Low CHO and calorie protein supplement for any of the above goals refer to WheySmooth

Protein in Pre/Post Workout Formula & Meal Replacement (PPMR)

The protein blend in PPMR is predominately whey concentrate as it is in FS and WheySmooth. Compared to other proteins, whey protein has been shown to be superior in delivering muscle protein synthesis (MPS), health and weight control outcomes based on its unique functional properties such as: 1) higher essential amino acid (EAA) content (12.4 g/25 g); 2) higher BCAA (5.6 g/25 g); 3) higher leucine content (3 g/25 g); 4) faster digestion to timely amplify MPS during metabolic windows; 5) less splanchnic amino acid (AA) extraction so more AA are directly available for MPS; 6) whey concentrate (WC), along with the AAs, contains additional unique growth and health/immune factors[1] (the practitioner is referred to the WheySmooth Section in the PDSRG for complete detailed referenced data for whey protein including mechanisms of action). Therefore, based on efficacy, PPMR uses an ion-exchange instantized protein blend containing 90% whey concentrate, 5% whey isolate (cold filtered) and 5% casein for immediate and extended release and easy mixing. **Note:** There is 1.4 g of lactose per serving. Therefore, unless you have been diagnosed with "severe lactose intolerance," which is extremely rare, this amount should not cause a reaction. Most lactose mal-digesters and individuals who consider themselves lactose intolerant can consume 6-12 grams of lactose without major symptoms. As a reference, one cup of milk or yogurt has 12 and 9 grams of lactose, respectively.

Carbohydrate –Maltodextrins

PPMR is also designed to be a fast acting ~1.7:1 CHO to protein supplement that can be altered as needed. The carbohydrate content in PPMR is strategically designed for 1) appropriate calorie to protein ratio for most athletes/exercisers (especially health club participants) but also allow for adjustments (added foods/fluids into mix) as desired; 2) rapid gastric emptying, thus oxidation during pre/post workout used to help maximize MPS and glycogen replenishment within the "metabolic windows"; 3) flavor and easy mixing properties.

Maltodextrin

Maltodextrin is a polysaccharide. It is a lightly hydrolyzed starch used as an ingredient in many food products as a thickener and carbohydrate source.[2] Maltodextrin is easily digestible, as it is absorbed as rapidly as glucose but is moderately sweet or sometimes bland, making it desirable in food manufacturing.[2]

Carbohydrates (CHO) in sports are generally placed in two categories. CHO that can be oxidized (used for energy) rapidly (up to ~60 g/hr) and those oxidized more slowly (up to ~40 g/hr).[3] Maltodextrins like glucose, maltose and sucrose fall in the rapid category.[2] These carbohydrates are digested and absorbed at fast rates making them readily available to working muscle and also allows rapid amino acid absorption from co-ingested protein.[4] These qualities, including maltodextrins' food mixture compatibility, make maltodextrins ideal in a product like PPMR that is designed to deliver both timely protein and CHO to working muscles and help maintain a satisfying daily CHO to protein ratio for exercisers seeking fat/weight loss.[2,3,5]

Dietary Fat Blend

The dietary fats in PPMR, made up of high oleic sunflower oil, medium chain triglyceride and safflower oil, supply 14% of total calories in order to allow 1) rapid digestion of combined protein and CHO as too much dietary fat slows digestion;[6,7] 2) enhanced flavoring and mixing qualities of the product.

Co-factors Including Sweeteners

Co-factors in a protein/CHO powder are combined in minute amounts to deliver satisfying taste and texture, mixing ability, uniformed nutrient distribution, proper ingredient flow and stability including during cooking or baking, and a practical product shelf life.

Sweeteners

Sweeteners used in PPMR appear at the end of the ingredient list as they are present in negligible amounts per serving and thus have no effects within the body other than taste. For more information on non-nutritive sweeteners click here. Non-nutritive sweeteners (NNS) are those that sweeten with minimal or no carbohydrate or energy. NNS are regulated by the Food and Drug Administration (FDA) as food additives. The FDA approval process includes determination of probable intake, cumulative effect from all uses, and toxicology studies. Seven NNS are approved for use in the United States with acesulfame K and sucralose being among the most popular.[8] They have different functional properties for use in enhancing food products. All NNS approved for use in the United States are determined to be safe.[8,9]

Acesulfame Potassium (Ace-K)

Acesulfame potassium is ~200 times sweeter than sugar and is often combined with other sweeteners as an additional flavor enhancer in foods and because it is heat stable (stays sweet even when used at high temperatures during baking).[10] Ace-K is typically used in frozen desserts, candies, beverages, and baked goods. More than 90 studies support its safety and used in PPMR to support baking capacity and sweetness.[11]

Sucralose

Sucralose is also a NNS and is made from sucrose by a process that substitutes three chloride atoms for three hydroxyl groups on the sucrose molecule.[12] Sucralose is 450–650 times sweeter than sucrose, possesses a pleasant sweet taste

and a quality and time intensity profile that is similar to that of sucrose making it a popular NNS.[13] Sucralose has been extensively studied with more than 110 safety studies reviewed by FDA in approving the use of sucralose as a general purpose sweetener for food.[8,11] A primary advantage of sucralose for consumers is its exceptional stability. It retains its sweetness over a wide range of temperature and storage conditions and in solutions over time. This stability allows manufactures to create greater tasting foods and beverages and maintain the fresh flavor. Like Ace-K, sucralose is heat stable, making it an ideal sugar substitute in baked goods.[13,14]

Carboxymethyl Cellulose

Carboxymethyl cellulose (CMC) or cellulose gum is a cellulose (fiber) derivative. CMC is used in food as a viscosity modifier or thickener, and to stabilize emulsions (emulsifier) in food products. CMC is used extensively in gluten free and reduced fat food products such as PPMR.[15] Use of CMC also ensures smooth dispersion in flavor oils, and improves texture and overall quality.[15]

Xanthan Gum (XG)

Xanthan gum is a water soluble, high molecular weight natural polysaccharide produced by a fermentation process.[16] Due to its soft texture, xanthan gum is widely used as a thickener or viscosifier in the food industry.[17] XG also functions as a stabilizer for many different formulations with applications in pharmaceuticals, dietary supplements and food products such as PPMR.[18]

PPMR Summary

The Pre/Post Workout Formula & Meal Replacement (PPMR) macronutrient profile of approximately 55% CHO, 31% protein and 14% fat, along with the ingredients allow it to be used across multiple goals. Use is based on preference since PPMR in its native form can work for all stated goals albeit without being as specific as: 1) FirstString in delivering the higher CHO needs for performance and very active athletes (however, CHO can be added to the PPMR mix as desired); 2) LeanMR which incorporates a whey isolate to eliminate cholesterol and contains a specialized slow releasing CHO blend for struggling dieters; or 3) WheySmooth being a low calorie, high protein alternative for any goal when lowering body fat is a primary focus. Therefore, based on individual preference including taste, calorie and carbohydrates needs, PPMR can be used as a meal replacement in weight loss, a pre/post workout supplement, a daily protein and weight gain supplement, and can also be altered as desired by adding other protein, carbohydrate and or dietary fat sources.

Whey proteins have proven superior to other protein sources in stimulating MPS and therefore PPMR uses an ion-exchange instantized protein blend containing 90% whey concentrate, 5% whey isolate (cold filtered) and 5% casein for immediate and extended release and easy mixing along with co-factors that give the product its desirable taste, texture and stability. The CHO source is predominately maltodextrins for fast acting fueling and refueling of muscles. The combination of PPMR's fast acting CHO and protein sources make it ideal to timely amplify MPS during the so-called metabolic windows.

Typical Use

The Pre/Post Workout Formula & Meal Replacement (PPMR) formula is designed to support multiple sport and fitness goals: 1) a meal replacement as needed for weight loss and/or weight maintenance; 2) meal or daily supplement for weight gain; 3) pre and post workout formula to enhance exercise induced results especially within metabolic windows; 4) daily protein supplement to help meet the current increased protein recommendations.

- As a pre- and post-workout supplement for performance goals, consume the amounts below 30-40 minutes before exercise based on body size:
    - 100-150 lbs - 1.5 scoops
    - 151-200 lbs - 2 scoops
    - 200-250 lbs - 3 scoops
    - Greater than 250 lbs - 4 scoops
- Immediately following training, repeat the same dose unless also using AminoBoostXXL (see muscle stacking) at which time you would consume PPMR 30 minutes following the immediate AminoBoostXXL post exercise dose.
- As a meal replacement for weight/fat loss, use PPMR to supply two small meals within any calorie restricted meal plan of 4-5 meals per day. As a weight gain supplement use as needed throughout the day to meet individual protein, CHO, calorie and nutrient timing goals.
- Anyone wanting a great tasting, convenient meal replacement and/or additional protein source.

Precautions
Older data suggested an increase in calcium loss with high protein intakes, which may predispose the individual to an increased risk of osteoporosis.[19] However, newer studies have found the link between protein intake and bone health to be positive[20,21] or to have no effect.[22,23] The Institute of Medicine's and other related studies have concluded that levels of dietary protein are not associated with a decrease in renal function with age.[24,25,26,27,28,29,30,31]

Contraindications
PPMR is contraindicated in people who cannot consume milk proteins.

Adverse Reactions
There should be no adverse effects in healthy users at the recommended doses unless allergic to milk proteins.

Upper Limit/Toxicity
Currently there is no upper limit established for protein.[31]

Summary

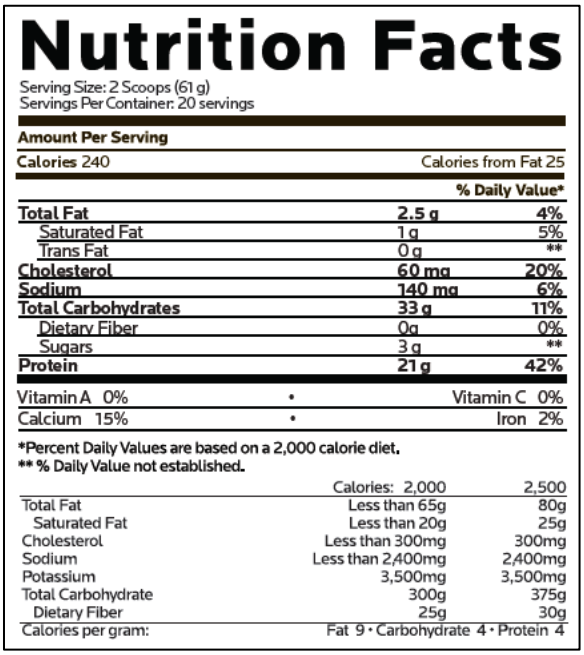
Purpose
The Pre/Post Workout Formula & Meal Replacement (PPMR) formula is designed to support multiple sport and fitness goals: 1) a meal replacement as needed for weight loss and/or weight maintenance; 2) meal or daily supplement for weight gain; 3) pre and post workout formula to enhance exercise induced results especially within so called metabolic windows; 4) daily protein supplement to help meet the current increased protein recommendations.

- One serving provides 21 g of whey protein, 33-35 g of CHO, 150 mg of calcium all in 240-250 quality calories
- Ability to deliver the needed ingredients to allow surplus nutrients/calories to be incorporated into muscle tissue rather than body fat when appropriate resistance exercise or activity is included and total daily calories are appropriate.
- Can be made to any specification (i.e. may add ingredients to achieve the desired level of calories protein, fats and CHO).
- The PPMR can supply a nutrient-rich, convenient snack between meals to boost energy, curb hunger and control calories to assist in weight control.

Unique Features
- CHO content satisfies the necessary profile for maximizing protein synthesis while fitting into a "low sugar" claim, which will appeal to prevailing perceptions.
    - One serving: 21 grams of protein, 33-35 grams of CHO and only three grams of sugar

- Sophisticated ideal blend of the highest quality fast and extended acting proteins
- No aspartame and relatively low in sodium
- Co-factors ensure nutrient uniformity and stability with great taste and easy mixing
- No gas or bloating as is common with other protein powders
- As with all dotFIT (dF) products, PPMR is designed in a synergistic relationship with all other dotFIT products and a person's traditional food intake. dF powders are NOT spiked with unnecessary nutrients. Most other products in this space (e.g. bars, shakes, ready-to-drinks, etc.) are heavily spiked with many nutrients which can lead to undesirable levels within the body when combining multiple manufacturers, products and normal food intake.
    - When consuming only dotFIT products as directed with one's normal daily food intake, the recipient is assured of keeping the body at a safe and optimal nutrient level.
- Formulated and manufactured for great taste and pleasing texture in a regularly inspected NSF certified facility, in compliance with Good Manufacturing Practices (GMPs) exclusively for dotFIT, LLC.

Nutrition Facts



Nutrition Facts

Serving Size: 2 Scoops (61 g)
Servings Per Container: 20 servings

Amount Per Serving

Calories 240	Calories from Fat 25
	% Daily Value*
Total Fat	**2.5 g** **4%**
Saturated Fat	1 g 5%
Trans Fat	0 g **
Cholesterol	**60 mg** **20%**
Sodium	**140 mg** **6%**
Total Carbohydrates	**33 g** **11%**
Dietary Fiber	0g 0%
Sugars	3 g **
Protein	**21 g** **42%**

Vitamin A 0% • Vitamin C 0%
Calcium 15% • Iron 2%

*Percent Daily Values are based on a 2,000 calorie diet.
** % Daily Value not established.

	Calories: 2,000	2,500
Total Fat	Less than 65g	80g
Saturated Fat	Less than 20g	25g
Cholesterol	Less than 300mg	300mg
Sodium	Less than 2,400mg	2,400mg
Potassium	3,500mg	3,500mg
Total Carbohydrate	300g	375g
Dietary Fiber	25g	30g
Calories per gram:	Fat 9 • Carbohydrate 4 • Protein 4	

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