

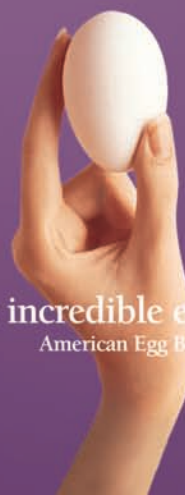
egg-cellent

Foods

egg-cellent

Protein

Consumers are looking
for energy boosting foods.
Can you help?



The incredible edible egg™
American Egg Board

®

egg-cellent Foods

egg-cellent Protein

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Diet fads come and go but an emerging result of the continued media coverage of these dietary swings is that the pendulum is settling back to middle ground -- sensible eating. And as media coverage increases, consumers today are savvy and well educated about foods' health advantages and disadvantages. Nine out of ten consumers consult the nutrition facts panel on food labels. (IFIC Food & Health Survey: Consumer Attitudes toward Food, Nutrition and Health, May, 2006) And consumers are seeking better-for-you, more functional foods that contribute to well-being and not to the waistline.

To create super foods you need super ingredients. The egg can help. Nature's almost perfect source of protein, the egg, sets the standard against which all other proteins are measured. Eggs contain very available, easily digestible protein compared to many other types. Research shows that high-quality protein, such as the protein found in eggs, helps

build muscle strength and helps people feel full for a longer period of time after eating. One large egg contains six grams of protein and 97% of an egg's protein is in the form of easily digestible, essential amino acids, which means the body is able to quickly and efficiently utilize it to fuel muscles.

Amino acids and protein rank high on the list of functional ingredients to watch, according to Euromonitor research. And the United States holds the biggest market share for better-for-you foods, at \$41 billion for 2004. (Euromonitor Health and Wellness Market Report, 2005) Better-for-you foods promote overall well-being, rather than one specific health benefit. Egg protein provides one sure way to develop healthier, more nutritious foods that fulfill the market demand for such products.

Not only are eggs rich in protein, this dense nutritional package contains almost every available vitamin and mineral needed by humans, including riboflavin, vitamins A, B12 and B6, D and E, folate, phosphorus, selenium, iron and zinc. They are relatively low in calories and fat for a protein-rich food, virtually free of

trans fats, are widely available and highly economical.

Egg protein, as a functional, nutritious ingredient serves nutritional needs throughout all age categories. Protein is one of the most important structural components of the human body. At least a part of every cell in the human body is made up of protein. Proteins also function as enzymes and hormones and play other essential roles. Protein is especially important for growth during infancy and childhood. Older adults need amino acids for constant repair and maintenance of body tissues. Plus, muscle mass is gradually replaced by fat tissue, causing *sarcopenia*, a loss of muscle strength. Research has shown that diets high in animal protein can help prevent the loss of lean tissue, preserve muscle function and maintain the immune response.

From pregnant and nursing mothers through childhood, active adults and seniors, each group represents a potential opportunity for creating foods and beverages that boast a more complete protein profile.

Egg proteins are recommended during pregnancy and for lactating women. Breakfast studies show a direct relationship between that first meal and day-long school performance and eggs are easy and economical to serve. Athletes were the first to discover egg's protein wonders. And elderly adults specifically require a greater protein

density per kg than younger adults. Sarcopenia is an age-related loss of skeletal muscle mass. The high-quality protein such as that found in eggs can help with the development of muscle growth in response to exercise.

This super protein also contributes functional properties to food formulations such as binding or thickening, emulsification, foaming or aeration, and retardation of crystallization.

Further processed egg products provide multiple choices for the formulator interested in increasing protein content on a nutrition facts label. Whether refrigerated liquid, frozen or dried, the protein quality remains the same. When properly stored, these processed egg ingredients will maintain a stable shelf life for months.

Some of the advantages of processed eggs include:

- Reduced risk of contamination
- Extended shelf life
- Convenience
- Consistent performance
- Product stability
- Functionality

Egg ingredients improve the texture and acceptability of products that often encounter freeze/thaw cycles. They also assist holding in moisture in foods that tend to dry out, such as reduced- or lower-fat baked goods. And when it comes to lowering fat

but maintaining viscosity, the protein content in eggs helps thicken sauces and gravies while at the same time adding body to improve product texture.

Egg proteins can also help when formulating for special dietary concerns, such as gluten-free. The proteins in wheat and other types of grains trigger reactions in people diagnosed with celiac disease, a condition that currently affects one out of 133 Americans. Egg albumin can substitute for these other proteins, to help create a gluten-free product with acceptable appearance and texture.

Creating foods that meet consumer demand for boosting energy is easier with natural, nutritious ingredients with the right functional properties. For more information on egg protein content and how it can contribute not only to human growth and development but also the development of a protein rich formulation and clean label, visit www.aeb.org/eggproducts/protein

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Nutritional Contribution of Eggs to American Diets

Won O. Song, PhD, MPH, RD, and Jean M. Kerver, MS, RD

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Elizabeth Applegate, PhD

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Protein, body weight and cardiovascular health

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A Review of Scientific Research and Recommendations Regarding Eggs
Stephen B. Kitchevsky, PhD