

## Proteins for Kids



Eating protein at breakfast is a great kick start to the day. It is a great way to fill up without consuming too much calories. An increasing number of protein sources are being introduced into the marketplace that offer quality nutrition, taste and sustainability all at the same time. Protein is an excellent source of energy and can have a profound influence on the formulation of weight-conscious foods for kids.

The common examples of protein-rich animal sources include lean meat, fish, poultry, egg and dairy. On the other hand, although animal-derived proteins constitute the majority of the protein we consume, plant-derived proteins can satisfy the same requirement with less environmental impact. The excellent plant-based proteins are vegetables, legumes, nuts, seeds and grains. Besides the natural food sources for protein, popular alternative sources such as whey protein serves as supplemental dietary proteins. Both of these proteins serve as sustainable alternatives for protein consumption.

### **Protein: The superb snacking frontier**

Healthy snacking is a great way to keep children power through their active day. By offering smaller meals and snacks throughout the day, it may reduce the risk of overeating but still provides the necessary energy and nutrition (Volpe et al., 2007). Snacking provides additional energy all day long, helping to fuel kids' bodies and minds. Energy needs will increase during childhood due to the periods of rapid growth and formation of muscle, blood and bone which require high levels of metabolism.

Snacks provide a good portion of the nutrient intake of school-age kids and adolescents. However, kids tend to take sugary snacks over more nutritious options. Hence, it is crucial to limit the sugar intake and ensure the kids get plenty of essential nutrients such as protein.

By having a variety of convenient, nutrient-dense and tasty snacks will provide opportunities for kids to increase their energy and nutrient intake. There are a variety of product formulations that have been designed to appeal to kids' taste buds while supplying the ingredients with desired nutrition and health benefits for their healthy growth and development. Additionally, parents can prepare snacks and beverages that are enriched with proteins as well as dropping a scoop of protein powder into their kids' milk, yogurt, cereal or smoothies for an added boost.

### **The 'Lego' for Healthy Growth**

Protein is an important dietary component for children, required to build and develop muscle tissues and to prevent muscle wastage. It acts synergistically with exercise to increase the rate of muscle protein synthesis and inhibit muscle protein breakdown which consequently leads to muscle growth over the time (Ahmetovic, 2012). Protein is vital for gaining lean body mass and to compensate for protein used as a source of fuel during exercises and muscle regeneration. Studies have concluded that dietary inclusion of whey protein improves the nutritional status as well as immune responses in kids (Acton, 2012; Lipski, 2006). Malnourished kids were administered whey protein in their diets and were found to have a higher recovery rate and better growth (Koletzko et al., 2017).

According to UNICEF (2009), dietary protein intake is associated with height, suggesting that protein rather than energy deficiency is the principal dietary cause of growth failure. Milk whey protein is reported to promote bone formation and its density and to suppress bone resorption, which helps in increasing height (Townsend et al., 2017; V.T., 2014).

### **Satiety sparkles as a hot benefit**

Protein, the powerhouse of macronutrient satisfies hunger by promoting the feeling of satiety within kids. Protein has taken center stage as a high satiety food constitute as considerable experimental and real-world researches indicated that by increasing the protein composition in the diet without changing net energy would lead to enhanced feelings of satiety. It aids in reducing hunger and keeps us feeling full longer as well as effectively helping to combat cravings. Protein has been clinically proven to promote satiety which can be used to make low-calories snacks that satisfy kids' appetite while keeping their calories in check. Satiety after the meal has been shown to be greater with high protein and fewer calories. It generates strong satiety sensations which can help curb snacking or overeating (Chambers et al., 2015).

### **Fuel Up for the Day**

Dietary protein is an important macronutrient, carrying about 4 kilocalories per gram (Sizer et al., 2012). Protein makes a significant contribution for approximately 10-15% to the total energy supply when other fuels such as carbohydrates and fats are unavailable during starvation (Lin et al., 2011; Grosvenor & Smolin, 2009). It helps to maintain a steady blood glucose level and serve the glucose needed for brain energy (Sizer et al., 2012). Furthermore, when the typical diet contains more proteins than needed, the body will first use amino acids from the diet to make body proteins and other nitrogen-containing molecules. Then, the excessive amino acids are metabolized to provide energy due to the inability of the body to store extra amino acids (Grosvenor & Smolin, 2009).

## **Whey Protein joins the Kid's Club**

Protein powders especially whey protein has experienced a massive surge in popularity. Whey powders are dietary supplements are designed to provide significant amounts of protein in a convenient, low-calorie package. There are many scientific studies that have been conducted on whey powder to be consumed as valid options to promote healthy lifestyle in kids. Lactose intolerance, the inability to digest and metabolize the sugar found in milk and milk products is quite common among kids. Whey protein is safe to be consumed by lactose-intolerant kids as virtually all lactose compounds have been removed by a filtering technique (Brant 2005).

Whey powder is a convenient way to add high-quality protein to children's diet. It is an ideal supplement for healthy growth and development for kids, aiding both their cognitive and physical functions. For nutritional functionality, whey powder is known to possess superb digestion-absorption characteristics in which it is easily digested and efficiently absorbed into the body, thus it is often referred to as a "fast" protein for its ability to quickly provide nourishment to muscles (Cribb et al., 2006; Middleton et al., 2004). Whey powder contains essential amino acids that cannot be naturally produced by humans. Getting sufficient amino acids is crucial to keep our active muscles in good condition. Whey protein can potentially help to induce bone formation (Wright & McMorrow, 2017).

Whey protein can also function in boosting children's' their natural defenses against infections. It helps the body to produce a number of important chemicals needed to create antibodies, enzymes and hormones. Whey protein promotes the rebuilding of tissues, wound healing and fighting infection (Geary et al., 2010). The powder is rich in cysteine which stimulates the production of the antioxidant glutathione (Zhou et al., 2015). Glutathione is a powerful defense that plays protective role against the damaging effects of bacteria within kids. It helps to shield their immune system and support for optimal immune function (Perricone et al., 2009).

## **Protein Takes Center Stage**

High-protein snack is riding the wave of marketing messaging from manufacturers competing for market share within the snack industry (Bizzozero, 2014). The demand for kids' snacks that taste great and offer good nutrition is increasing and that is not always an easy balance to achieve. The growth of snacking is being driven by the addition of functional ingredients for health benefits especially the inclusion of ingredients like proteins that supports protein utilization.

Healthy snacking is a great way to keep kids going through their active day. It is absolutely a great opportunity to 'squeeze in' some extra nutrition for kids to keep their days refreshed and healthy. The right choice of nutrition-packed snacks would help kids acquire the necessary nutrition that are needed for growing minds and bodies. Healthy snacks with a punch of protein give growing kids more energy along with essential nutrients that their bodies need.

Parents are looking to add protein to their kids's diets from the food and beverage they buy. They are willing to pay for the added benefits of protein-enriched snack (Bizzozero, 2017). Thus, formulating and marketing foods and beverages that leverage proteins presents an opportunity for global growth in trend with health, taste, sustainability and consumer demand (Bizzozero, 2014).

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