



Foods that promote growth and development in children with cerebral palsy

Sri Hartini*

Department of Medicine, University of Gadjah Mada, Yogyakarta, Indonesia

E-mail: srihartini@gmail.com

Abstract

Cerebral palsy (CP) is a collection of conditions that impact a person's ability to move, balance, and maintain posture. The most prevalent motor disability in children is cerebral palsy. Cerebral refers to something that has to do with the brain. Palsy refers to muscle weakness or difficulty using muscles. An ideal cerebral palsy diet will meet your child's nutritional demands while also reducing the risk of subsequent problems.

Keywords: Palsy, Choline, Neuroprotection, Malnutrition.

INTRODUCTION

Cerebral palsy is a developmental disorder, which means it affects people while they are very young. To encourage growth and development, children require adequate nourishment. A balanced diet also boosts energy levels and body functioning, which can help with physical therapy performance.

This article will discuss nutrient-dense foods to include in a cerebral palsy patient's diet. But first, let's go through some of the elements that can influence a cerebral palsy patient's nutritional requirements.

Dietary Requirements for People with Cerebral Palsy. Cerebral palsy is a term that refers to a range of motor deficits of varied severity. As a result, nutritional requirements for those with cerebral palsy will differ.

The following are some of the factors to consider:

The degree to which a person's motor deficits are severe. Individuals with milder motor deficits are typically more physically active and demand more energy. Impairment of the oral motor system. When the muscles around the mouth are affected by cerebral palsy, people may find it difficult to chew and swallow their food. Consider using a blender or food processor to break down your child's food and make it simpler to digest if they have oral motor deficits (Ali et al., 2007).

The delivery of a child too soon. Cerebral palsy is frequently caused by premature birth. Prematurely born babies are often smaller, which should be taken into account when determining their nutritional requirements. During the first

two years of life, 85 percent of children born prematurely catch up to their developing peers.

Complications that develop simultaneously. Gingival reflux disease affects some children with cerebral palsy, causing stomach acid to irritate the oesophagus and produce heartburn. Foods that are greasy, spicy, or acidic might cause acid reflux and should be avoided.

A feeding tube may be required for people with severe oral motor deficits. While many parents are resistant to the use of a feeding tube, it is critical to put your child's nutrition first as they grow. Your youngster may not need to use the feeding tube exclusively. They can usually eat regularly and use the feeding tube to complement their daily nutritional requirements.

Foods to Eat If You Have Cerebral Palsy

Due to oral motor deficiencies, digestive issues, and decreased physical activity levels, children with cerebral palsy are at a higher risk of malnutrition.

We'll go over 10 foods to add in your child's diet to encourage neuroprotection and good development in the section below.

Eggs

Eggs are high in protein and choline, making them an important part of the diet of people with cerebral palsy.

Protein consumption is essential for muscle building and tissue growth. This is especially crucial for those with cerebral palsy, who may have weak muscles as a result of their limited mobility.

Choline is a critical ingredient for the production of acetylcholine, a neurotransmitter that influences mood, memory, muscular control, and other vital nervous system processes. As a result, getting enough choline in your diet can help your brain get the nutrients it needs to improve motor capabilities.

Avocados

Avocados are high-fat, high-calorie fruits that are packed with vitamins and minerals.

Because of difficulties controlling the muscles around the mouth, many people with cerebral palsy may be malnourished. As a result, kids may have difficulty chewing and swallowing.

Avocados, which are high in calories and nutrient density, can help people with CP eat enough.

Nut Butters

Nut butters, such as peanut and almond butter, are high in good fats and require less chewing, so they may help people with cerebral palsy get enough calories.

They're also quite adaptable and generally kid-friendly. You may add extra protein, fibre, healthy fats, and other critical vitamins and minerals to your child's meal by blending them into oatmeal or smoothies.

Extra Virgin Olive Oil

Olive oil is a healthy fat that can be incorporated in cerebral palsy patients' diets.

Olive oil has high levels of polyphenols, which are antioxidant-rich micronutrients that help enhance neuroprotection through free radical scavenging, lipid peroxidation inhibition, and anti-inflammatory effects.

Dark, Leafy Greens

Dark leafy greens, such as spinach and kale, are required for a balanced diet, but they can be especially beneficial to people with cerebral palsy because they contain vitamin K, which is necessary for brain function and strong bones.

Folate, a B vitamin required for the synthesis of serotonin, epinephrine, norepinephrine, and dopamine, is also found in leafy greens. These neurotransmitters serve to boost mood and may also help to moderate the heightened behaviour difficulties that are typical in children with cerebral palsy.

Due to their slower metabolic rates, many people with cerebral palsy have trouble digesting food. Increasing your child's fibre intake by including dark, leafy greens in their diet will help them have more regular bowel movements (Bandini et al., 1991).

Whole Grains

Many people with cerebral palsy spend the majority of their days in a wheelchair. The abdomen is compressed for long

periods of time, slowing digestion and reducing blood flow.

Oats, brown rice, whole wheat, whole rye, barley, and quinoa are all high in fibre and healthful whole grains.

Prebiotics are the dietary fibres found in whole grains. They improve digestion and help to establish healthy bacteria in the gut.

Greek Yogurt

Because many children with cerebral palsy may not get enough calories owing to eating difficulties, their bones and muscles may atrophy.

Greek yoghurt contains a lot of calcium, which is good for bone health and nerve function.

Greek yoghurt is also high in protein, which may help strengthen muscles by enhancing cell growth and repair.

Nutrients that Cerebral Palsy Children Require But May Lack

A number of children with cerebral palsy lack the proper amount of nutrients needed to maintain health due to drugs, associated disorders, and lifestyle (Brosco and Feudtner 2006). The following are examples of common nutritional deficiencies:

Calcium

The skeletal system contains nearly all of the calcium in the body. The rest of it is responsible for blood pressure regulation, soft tissue function, and muscle movement. Calcium aids hormone secretion as well as blood flow constriction and relaxation.

Muscle contraction is also dependent on it. Osteopenia, a medical disorder characterised by frail and weak bones due to a decrease in calcium, is identified in many children and adults with cerebral palsy.

Magnesium

Magnesium aids in the production of energy, cell communication, the synthesis of molecules, and the development of strong bones in infants. The majority of people have low magnesium levels, however research shows that those with cerebral palsy are more likely to have low magnesium levels.

Vitamin C is a powerful antioxidant.

Mood fluctuations, despair, and anxiety are common among children with cerebral palsy. It's possible that they don't have enough vitamin C in their bodies to make the norepinephrine neurotransmitter. Adequate vitamin C also help children battle common illnesses(Campanozzi et al., 2007).

Copper

Copper can be found in a variety of areas, including the brain, heart, kidneys, skeletal muscles, and liver. It helps with the absorption of iron, collagen maintenance,

and infection prevention. Copper deficiency, as well as manganese deficiency, a component typically found in iron-containing minerals, are common in cerebral palsy patients.

In youngsters, low amounts of copper and manganese can cause brittle bones, neurological issues, growth problems, and an increased risk of infection.

National Nutrition Month is celebrated every October.

Every year, the month of March is recognised as "National Nutrition Month." The goal for this month is to encourage people to learn more about adequate nutrition and make the necessary dietary changes to live a healthy lifestyle.

National Nutrition Month is celebrated every October.

Every year, the month of March is recognised as "National Nutrition Month." The goal for this month is to encourage

people to learn more about adequate nutrition and make the necessary dietary changes to live a healthy lifestyle.

REFERENCES

- Ali O, Shim M, Fowler E, Greenberg M, Perkins D, et al (2007). Growth hormone therapy improves bone mineral density in children with cerebral palsy: a preliminary pilot study. *J Clin Endocrin Metab.* 92:932–937.
- Bandini LG, Schoeller DA, Fukagawa NK, Wykes LJ, Dietz WH (1991). Body composition and energy expenditure in adolescents with CP or myelodysplasia. *Pediatr Res.* 29:70–77.
- Brosco JP, Feudtner C (2006). Growth attenuation: a diminutive solution to a daunting problem. *Arch Pediatr Adolesc Med.* 160:1077–1078.
- Campanozzi A, Capano G, Miele E, Romano A, Scuccimarra G, et al (2007). Impact of malnutrition on gastrointestinal disorders and gross motor abilities in children with cerebral palsy. *Brain Dev.* 29:25–29.