Vegetarian children

Young children need to meet their nutrient requirements in the most efficient way possible, and both time (children are busy people) and space (given the size of their stomachs) are an issue. Young children have greater nutrient needs than adults per unit of weight.

So, while there are many benefits to a vegetarian diet, it is a way of eating that requires more dedication. There is often concern that vegetarian diets can't provide adequate amounts of essential nutrients, in particular iron, B12 and protein.

Being vegetarian does not mean eating just fruit and vegies; in fact, limiting a diet to only selected food groups increases the risk of nutrient deficiencies.

When a vegetarian diet is properly constructed it can provide all the nutrients required for the human body to survive and even thrive. Indeed, some vegetarian habits have been shown to be advantageous to our health and can lower the risk of many common diseases. **The major issue is the construction and vigilance of the diet.**

HEALTH BENEFITS OF VEGETARIAN DIETS

Studies show that vegetarian diets correspond more closely with the healthy eating ideal than non-vegetarian diets because they are lower in saturated fat and higher in whole grains (including fibre) and fruit and vegetables. A vegetarian's intake of several nutrients, notably thiamin (vitamin B1), folate, vitamin C, carotene and vitamin E, tends to be higher than in non-vegetarians.

Vegetarians also appear to have a lower incidence of some chronic diseases, particularly heart disease and some cancers. Studies have shown that vegetarians suffer less from hypertension, obesity, non-insulin-dependent diabetes and gallstones. Now that's a bonus!

One last benefit relates to our lovely fussy foodies. If you have a little one who can sniff out a vegie from 10 metres then consider that lentils, peas, nuts and seeds are included in the vegetable food group. You can easily sneak mashed chickpeas into baking, lentils into stews and so on; they are difficult to detect and can help ease your mind about the state of your fussy foodie's diet.

TYPES OF VEGETARIAN DIETS

Of course, being vegetarian means different things to different people and as a result, vegetarian diets vary quite significantly; furthermore, how one person defines a vegetarian diet can be different to another's definition. Naturally, whether vegetarian diets can supply all the nutrients necessary for health and wellbeing depends on the type of vegetarian diet followed.

Vegetarians: A blanket term that describes people who exclude meat, poultry, fish, or other animal-derived foods from their diet.
Lacto-vegetarians: People who include milk and milk products, but exclude meat, poultry, fish, seafood and eggs from their diet.
Lacto-ovo-vegetarians: People who include milk, milk products and eggs, but exclude meat, poultry and seafood from their diet.

Perhaps we could add another group called quasi-vegetarians: those who call themselves or are called vegetarians – but who still eat fish or other selected meats.

Vegan diets (which exclude all animal-derived foods including meat, poultry, fish, eggs and dairy products) are generally not considered appropriate for pregnant or nursing mothers and infants and young children due to the restricted variety of foods, food groups and nutrients.

PROBLEM NUTRIENTS IN SOME VEGETARIAN DIETS

Iron: Both vegetarians and non-vegetarians may have difficulty achieving the RDI for iron. Iron from plant sources (non-haem iron) is absorbed less efficiently (2–8%) than iron from animal sources (heme-iron, absorbed at about 15–35%), so vegetarians are probably more at risk of iron deficiency than meat eaters. However, vegetarians usually consume plenty of vitamin C-rich foods which can enhance the absorption of iron from plant foods.

Vitamin B12: This is found almost exclusively in animal foods. B12 plays an integral role in maintaining our nervous system and producing DNA (genetic material). Some studies show that adequate B12 can protect against genetic abnormalities. Vegetarians who regularly consume dairy products are unlikely to be at risk of a deficiency. Individuals not consuming animal products should seek professional advice about sourcing B12.

Energy: Plant sources of food are rich in many nutrients and health-giving factors; however, they tend to provide less energy than animal sources. It is important that young children gain enough energy for growth and development; they must also be given enough dietary fat for brain and eye development. Vegetarian children require foods that are rich sources of healthy fats such as avocado, nut butters, tahini, oils and spreads.

Protein: Provided a varied diet is eaten, vegetarians and vegans should be able to gain sufficient protein from their diets. A well-balanced vegetarian diet normally exceeds the RDI for protein, although it often supplies less protein than a diet containing meat, poultry and fish. Vegetarians and particularly vegans should consider protein-combining to ensure they gain all the essential amino acids for health (see Figure 1).

Zinc: Vegetarian and vegan diets usually contain less zinc than meat-based diets. Zinc is vital for growth, immunity and development, and is currently a top concern regarding vegetarianism in children. In wealthy countries, however, this is far less pronounced.

Calcium: Vegetarians who regularly consume dairy products are likely to achieve calcium recommendations.

Omega-3 fatty acid: Recent research into the omega-3 fatty acid DHA has raised the possibility that low intakes may be of concern for the development of infants born to vegetarian mothers, but more research is needed.

TIPS FOR CAREGIVERS AND PARENTS

There are some basic principles to follow to ensure that your vegetarian child gains all the nutrients he or she requires for optimal health and development:

- Combine two or more sources of protein at each meal.
- Offer a variety of protein-rich foods over the day, avoiding an over-reliance on a few select protein foods – often this is cheese.

- Ensure your child regularly eats adequate amounts of iron-rich foods such as beans, baked beans, dried fruits, whole grains, dark green vegetables and nuts. (Take care when giving small foods to young children as there is a risk of choking; however, you can substitute these with nut pastes, butters and meals/powders.)
- Introduce small amounts of healthy oils from nuts and seeds to make up for any loss of essential fatty acids due to not consuming fish and other animal foods.
- Ensure protein is eaten daily by offering plant-based proteins such as lentils, pulses and grains as well as animal proteins such as egg, cheese, milk, yoghurt etc.

GETTING ALL THE RIGHT PROTEINS – VARIETY!

When we eat food that is low in or missing an essential amino acid, our body is unable to produce this protein. If our body requires this amino acid to make something (such as muscle, antibodies, blood cells, neurotransmitters etc.) and we are unable to make it ourselves, the production is stopped. This is why it is important to have daily access to all the essential amino acids.

Protein complementation is one way to avoid this (see Figure 1). This is the process by which an essential amino acid that is low in one food can be made up (complemented) by eating another food that contains an excess of that amino acid. For example, small quantities of animal protein eaten with low quality vegetable protein will improve the overall protein quality of the diet.

Recent research suggests that protein-combining isn't required given the way the body processes protein. Still, it highlights the importance of eating a wide variety of traditional and non-traditional protein-containing foods and, at the very least, draws attention to the variety of protein foods available.

VEGETARIAN MEAL IDEAS

You do not have to be a vegetarian to enjoy the many benefits of a vegetarian diet. Remember, eating a VARIETY of healthy food is the key to a healthy diet. Many children enjoy vegetarian options, for example try:

- Bean or falafel burrito.
- Vegetarian sausages (in the fridge section of your supermarket) with pasta and fresh vegies.
- Vegetarian sausage hotdog with cheese.
- Vegie burger with a tempeh, lentil or chickpea patty, egg and cheese.
- Vegetarian nachos with kidney beans, cheese and nachos.
- Cheese platter and falafels (chickpea balls).
- Crackers and mezze plate with hummus, tzatziki, guacamole, babaganoush, falafels.
- Lebanese roll-up with cheese and Mediterranean dips.
- Vegetarian schnitzels, kebab with salad and falafels.
- Raw tofu (the soft or silken tofu can be used as a dessert).
- Vegie burger patties in the refrigerated health-food section of the supermarket.
- Tapioca and ice-cream.
- Strawberry polenta and yoghurt.
- Sweet couscous and fruit.

Note: Many of these ingredients can be purchased ready-made and many have organic options; for example, vegetarian nuggets, lentils and chickpeas. No soaking or preparation is required.

For more recipe ideas go to Huggies Cook Book online.

Also, keep in mind that if you are giving your little one alternative milks, opt for brands that are fortified with calcium (at least 100mg per 100ml).

SUMMARY

While there is no reason why a child on a vegetarian diet should not thrive in the same way as children who consume meat, such a diet does require vigilance on the part of the caregiver.

WHERE TO GO FOR MORE INFORMATION

- Better Health Channel
- International Vegetarian Union
- Sanitarium Health Food Company
- The Vegan Society
- Vegetarian Resource Group

Figure 1 Plant protein sources for protein combining

Nuts and seeds *	Grains	Legumes ** (beans and peas)
• Almonds • Pecans • Macadamias • Cashews • Walnuts • Pistachios • Pepitas • Sesame and products such as tahini	• Wheat and products (e.g. breads and breakfast cereals) • Oats • Rice • Rye and products (e.g. breads) • Tapioca/sago (starch pearls from a manihot tree) • Cornmeal (polenta either from corn or maize) • Couscous • Barley • Bran • Buckwheat • Wheat germ • Millet	• Soybeans and products (e.g. tofu, soy milk, cheese etc.) • Chickpeas and products (e.g. hummus, falafel and chapattis) • Kidney beans • Lentils and products (e.g. lentil patties and dahl) • Lima beans • Mung beans • Black-eyed beans • Besan flour (made from chickpeas) • Peanuts *

* Whole nuts and seeds should not be given to young children due to the risk of choking. Nut butters, meals and pastes are suitable for young children.
** Most legumes require preparation prior to cooking either in the form of soaking overnight or long cooking. Many can be sprouted. All this increases the nutritional value of the legume significantly (due to the plant compounds called phytates that reduce our ability to digest the legume efficiently).
Source: Adapted from Lappe' and Lappe', Diet for a Small Planet, p153.

IF YOU ARE UNCERTAIN ABOUT ENSURING NUTRITIONAL ADEQUACY CONSULT YOUR NUTRITIONIST, DIETITIAN OR SUITABLY QUALIFIED HEALTH-CARE PROFESSIONAL

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