



Veggie Health for Kids

Why vegetarian and vegan diets are the healthiest and safest option for children.

by Laura Scott (MSc Nutrition)
VVF Snr Nutritionist

Plant-based diets offer the perfect vehicle for promoting healthy eating patterns in childhood, helping reduce the risks of developing many degenerative diseases in later life.

Animal Products Promote Disease

Meat and dairy products promote disease. They are high fat foods, a primary source of unhealthy (and inessential) saturated fats and cholesterol, contain no fibre, no complex (starchy) carbohydrate, none of the primary antioxidant (disease-busting) vitamins - C, E, and beta-carotene (the antioxidant form of vitamin A) and no vitamins E or K.

Vegetarian Diets Promote Good Health

Balanced vegetarian diets on the other hand protect health. Fresh fruits, vegetables, wholegrain cereals, nuts, seeds and vegetable protein sources such as soya (including fortified soya milks), beans and lentils provide all the nutrients eg. vitamins, minerals, protein, fibre, starchy carbohydrate and essential fats the body needs without the harmful saturated fat and cholesterol that animal products provide. Nutritional myths abound when vegetarian diets are discussed but a look at the science behind the claims shows that these are just that - myths to be dismissed! Take iron - a mineral that is found in many foods such as beans, wholegrains and dried fruit and whose absorption is increased when taken with vitamin C. Both the British Medical Association and the American Dietetic Association clearly state that iron deficiency anaemia is no more common in vegetarians than meat-eaters (1,2). Every leading health advisory body is saying the same thing - Western societies need to get away from eating animal products and turn to plant foods to ensure good health. There is no one element or 'magic bullet' in a meat-free diet - it is the totality of a vegetarian diet that is the secret of vibrant lifelong health.

What Are Children Eating?

Rubbish apparently. A Government survey published in June 2000 on the diet and nutrition of 4 to 18 year-olds found that roughly 80% of children are guzzling away on white bread, savoury snacks, biscuits, chips and chocolate confectionery. Roughly 60-75% had not eaten any citrus fruits or leafy green vegetables in the week of the survey (3). Children are eating a diet low in many of the vital health-promoting vitamins and minerals needed to help combat disease and a diet high in disease-promoting foods such as high fat, high salt and high sugar convenience-type foods. Meat and dairy products are still firmly placed at the centre of most meals.

The Right Start in Life for children

Diets based on animal products are quite simply leaving children unprotected in the health stakes. Encouraging children to adopt healthy eating practices from a very early age will mean that they will grow up choosing foods that will promote their good health not promote their ill health. Study after study proves that not only are vegetarian diets perfectly safe but have significant advantages over meat-based diets. Recent research comparing omnivore and vegetarian children found that vegetarian children had lower intakes of total and saturated fat, cholesterol and sodium and higher intakes of beneficial antioxidant (disease-busting) nutrients such as beta-carotene (the antioxidant form of vitamin A), vitamins C and E (4).

How Animal Products Affect Children Allergies and Food Intolerances

Food intolerances to cow's milk are increasingly common in both children and adults alike. Many children display an intolerance to the protein in cow's milk (casein) with symptoms such as diarrhoea and vomiting being an indication of a problem (5). Whole cow's milk is also a cause of milk-induced gastrointestinal blood loss which may contribute to the development of iron deficiency anaemia (6). Cow's milk is also being investigated as a possible cause of Cot death (7). The advice to parents now is that whole cow's milk should not be given during the first year of a baby's life (8). Children and adults can also be intolerant to the sugar (lactose) found in cow's milk. Contrary to what the dairy industry would have us believe lactose intolerance is actually the norm for human populations - testified by the fact that some 75% of the world's population can't digest lactose! (9). The enzyme required to break down milk sugar (lactase) is only required up to weaning - after this time there is no biological requirement to drink milk and certainly not the milk of another species! (10).

Cancer

Over a third of cancer deaths - and possibly many more - may be linked to diet. Getting the diet right at the very outset of life is crucial in minimizing the chances of developing this disease. Vegetarians are at a reduced risk for some cancers and there are a number of reasons for this. A diet high in fresh fruits and vegetables is now recognised as being one of the most important ways to help ward off cancer and of course these foods are typically abundant in good plant-based diets (11). Plant foods contain high levels of antioxidants - disease-fighting vitamins such as vitamins A, E and beta-carotene as well as fibre. Breast, prostate and colon cancer are all linked to the consumption of animal products such as dairy foods and meat (12, 13, 14). Eating high amounts of red meat (particularly processed red meat) eg. beef, veal, pork and lamb, is known to be associated with a 20-40% increase in colorectal cancer risk (15).

Diabetes

Diabetes is a group of disorders all leading to rises in blood glucose (sugar) levels due to the inaction of insulin - a hormone that takes glucose out of the bloodstream and into body cells. There is increasing evidence from a number of studies to show that early exposure to cow's milk may be a trigger for type I diabetes - the early on-set form of diabetes. One possible reason could be due to the cow's milk destroying the cells in the pancreas that secrete insulin (16). Worldwide cases of now wrongly named adult on-set diabetes or type II diabetes already top 150 million cases and numbers are set to rise dramatically. 80% of sufferers are overweight and the first cases of teenagers being affected by type II diabetes have been observed - all the sufferers being overweight. There is now very clear evidence that plant-centred, high-fibre, moderate protein/fat diets can greatly improve diabetic control and reduce the risks of it occurring in the first place (17).

Food Poisoning

Eating animal products causes 95% of all cases of food poisoning and children are particularly vulnerable. A complication of

infection with *E.coli* 0157 is now thought to be the biggest cause of acute (short-term) kidney failure in children. Farmed animals, in particular cattle, are thought to be the reservoir of infection (18).

Heart Disease

Incredible as it may seem, autopsy studies in children clearly demonstrate that the first signs of atherosclerosis (clogged-up arteries) is occurring at a very young age - a first step in the lead up to heart disease (19). Cardiovascular disease is the number one killer in the UK but the chances of dying from heart disease are greatly reduced by some 25% by going meat-free (20). Why? Vegetarians are, as a group, leaner and have lower blood pressure levels and cholesterol levels than comparable meat-eaters - both major risk factors for heart disease (1).

Osteoporosis

Osteoporosis - brittle bones - may be a disease we associate with old age but the prevention of it is firmly rooted in childhood. Peak bone mass is reached by the time someone is in their mid-30's so it is crucial that young people look after their bones from an early age. Obtaining calcium from drinking cow's milk is no guarantee of good bone health since there are a whole host of factors involved in making bones strong such as hormonal levels, activity levels and of course dietary issues (21). Whilst calcium is important in the diet what is equally important is holding onto this calcium. Animal products tend to cause bones to lose their calcium (due to their acidic nature) whereas plant proteins tend to encourage bones to hold onto it (22). Keeping active from an early age is crucial in maintaining good bone health as is the limiting of high intakes of salt and phosphorus derived from junk food diets and fizzy drinks.

Weight Problems

Currently, over half of women and about two thirds of men as well as at least 10% of children are classed as overweight or obese. The World Health Organisation states that obesity is linked to heart disease, high blood pressure, diabetes, osteoarthritis, gall stones and some cancers and that prevention is the key to tackling weight problems. The 1991 Bogalusa Heart Study showed that even mild obesity in childhood is related to higher levels of blood pressure, insulin and cholesterol levels and that to some extent these track into adulthood (23). Numerous studies show that vegetarians are leaner than meat-eaters (24, 25).

References

- 1 American Dietetic Association, 1997. Position of the American Dietetic Association: Vegetarian Diets.
- 2 BMA, 1996. Diet, Nutrition and Health. BMA Report;4-11.
- 3 National Diet and Nutrition Survey: Young People aged 4 to 18 years. Vol. 1: Report of the Diet and Nutrition Survey. London Stationary Office June 2000.
- 4 Thane CW and Bates CJ, 2000. Dietary Intakes and Nutrient Status of Vegetarian Preschool Children from a British National Survey. *J. Hum. Nutr. Dietet.*;13:149-162.
- 5 Iacono G et al, 1998. Persistent Cow's Milk Protein Intolerance in Infants: The Changing Faces of the Same Disease. *Clinical and Experimental Allergy*;28:817-823.
- 6 Sullivan PB, 1993. Cow's Milk Induced Intestinal Bleeding in Infancy. *Archives of Disease in Childhood*;68:240-245.
- 7 Collins S, 11/04/99. Scientists Link Cow's Milk with Cot Deaths. *Sunday Mirror*.
- 8 Committee on Nutrition, American Academy of Pediatrics;89(6):1105-1109.
- 9 Srinivasan R and Minocha A, 1999. When to Suspect Lactose Intolerance: Symptomatic, Ethnic and Laboratory Clues. *Postgrad. Med.*;104(3):109-123.
- 10 Oski F. 1983. Don't Drink Your Milk!. p.46. (Teach Services).
- 11 Key TJ et al, 2002. The Effect of Diet on Risk of Cancer. *The Lancet*;360:861-868.
- 12 Bingham SA et al, 2003. Are Imprecise Methods Obscuring a Relation Between Fat and Breast Cancer? *The Lancet*;362(9379):212-214.
- 13 Chan JM et al, 2001. Dairy Products, Calcium and Prostate Cancer Risk in the Physicians Health Study. *American Journal of Clinical Nutrition*;74:549-554.
- 14 Norat T et al, 2002. Meat Consumption and Colorectal Cancer Risk: Dose-Response Meta-Analysis of Epidemiological Studies. *International Journal of Cancer*;98:241-256.

Humans - A Vegetarian Species

What is becoming abundantly clear is that the type of degenerative diseases we tend to associate with adulthood are now beginning to occur in childhood. Weight problems, type II diabetes and the first signs of heart disease are just some of the major degenerative diseases that children are at risk of - both in childhood and in adulthood. For the first time in a century, life expectancy in the UK is set to fall as obesity and associated diseases such as diabetes and heart disease take their toll. The reason? - a junk food, meat and dairy-centred diet and chronic lack of activity. The cure? - a diet that provides all the necessary protective foods and rejects all the dangerous ones. Scientific evidence clearly shows us this means plant-based not animal-based foods. We are a vegetarian species and ignore our evolutionary past at our peril. As Professor Colin Campbell - Professor of Nutritional Biochemistry at Cornell University and one time senior science advisor to the World Cancer Research Fund states: "The closer one approaches a total plant food diet, the greater the health benefit...Animal foods, in general, are not really helpful and we need to get away from eating them." (26, 27).

Balanced plant-based vegetarian and vegan diets can extend healthy life expectancy by greatly reducing the risks of many degenerative diseases. Bringing your child up on a meat-free/dairy-free diet is, without doubt, the very best life insurance policy you could ever give them.

Summary

- Balanced vegetarian and vegan diets are perfectly safe for infants and children alike and are amply able to provide all the nutrients the body needs.
- Diets based around plants promote health - diets based around meat and dairy products promote disease.
- Vegetarian children have healthier diets than their meat-eating omnivorous peers.
- Vegetarian diets promote healthy eating patterns in childhood.
- Many degenerative diseases are caused by an over-reliance on animal products.
- Vegetarians, as a group, have a reduced risk of heart disease, diabetes, some cancers and obesity.
- Humans have the bodies of a vegetarian species - our risk of disease is increased by eating animal products.

- 15 Riboli E, 22nd June 2001. Meat, Processed Meat and Colorectal Cancer. EPIC Study - Preliminary Results.
- 16 Karjalainen J et al, 1992. A Bovine Albumin Peptide as a Possible Trigger of Insulin-Dependent Diabetes Mellitus. *NEJM*;327(5):302-307.
- 17 Chandalia M et al, 2000. Beneficial Effects of High Dietary Fibre Intake in Patients with Type 2 Diabetes Mellitus. *NEJM*;342:1392-1398.
- 18 Prof. E Goldman (Ed.), 2001. Stop Bugging Me. p.11 (Viva! Campaigns Ltd).
- 19 Berenson, GS et al, 1988. Association Between Multiple Cardiovascular Risk Factors and Atherosclerosis in Children and Young Adults. *N Engl J Med*; 338:1650-56.
- 20 Key TJ et al, 1999. Health Benefits of a Vegetarian Diet. *Proc.Nutr.Soc.*; 58:271-275.
- 21 World Health Organisation, 1991. Diet, Nutrition and the Prevention of Chronic Diseases. p.24.
- 22 Remer T and Manz F, 1994. Estimation of the Renal Net Acid Excretion by Adults Consuming Diets Containing Variable Amounts of Protein. *AJCN*;59:1356-1361.
- 23 National Forum for Coronary Heart Disease Prevention, May 1993. Food For Children: Influencing Choice and Investing in Health. p.20.
- 24 Burr ML et al, 1981. Plasma Cholesterol and Blood Pressure in Vegetarians. *J. Human Nutr.*;35:437-441.
- 25 Appleby PN et al, 1998. Low Body Mass Index in Non-Meat Eaters: The Possible Roles of Animal Fat, Dietary Fibre and Alcohol. *Intl. J. Obesity*;22:454-460.
- 26 Barnard ND, 1994. The China Diet and Health Study. *Good Medicine* vol. III, No.3, p.11.
- 27 The Arizona Daily Star, Tuscon, 9 May 1990. p.14.