

Plant-based Alternative Meat: nutrition

Nutrient	Animal Sources	Plant Sources
B12	Liver; Beef; Fish	Plant foods/drinks fortified with B12
Calcium	Milk; Yogurt; Cheese; Other dairy foods; Sardines (with bones)	Kale; Collard greens; Legumes; Figs; Bok choy; Broccoli; Chia seeds; Almonds; <u>Soy beans</u>
Essential Fatty acids (omega-6 and omega-3)	Oily Fish	<u>Omega-3</u> : Rapeseed Oil; Chia Seeds; Hemp seeds; Linseeds <u>Omega-6</u> : Sesame Oil; Pumpkin seeds; Sunflower seeds; Soybean Oil
Iodine	Cow's Milk (depending on farming practices)	Iodised salt; Seaweed
Iron	Liver; Muscles; Oysters; Beef	Beans; Quinoa; Pumpkin Seeds; Tofu; Chia seeds; Dried apricots; Fortified breakfast cereal; Kale; Lentils; Figs; Raisins
Protein	Eggs; Chicken breast; Turkey; Lean Beef; Fish; Cottage cheese	Lentils; Oats; Beans; Peanuts; Chia seeds; Pumpkin Seeds; Tofu; Quinoa; Almonds; Chickpeas
Vitamin A (animal foods), β-carotene (plant foods)	Eggs; Liver; Oily Fish	Mangoes; Carrots; Beetroot; Oranges; Peppers; Orange; Sweet potato
Vitamin D	Liver; Egg Yolks; Red meat; Oily Fish	Wild or ultraviolet-exposed mushrooms; Plant foods/drinks fortified with vitamin D
Zinc	Beef; Lamb; Pork; Cheese	Cashew nuts; Beans; Quinoa; Pumpkin Seeds; Tofu; Fortified breakfast cereal; Kale; Lentils

Protein Content in Plant Alternatives



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Choosing the right protein source

Most plant proteins lack in amino acids the human body needs. Plants are generally low in methionine (beans), lysine (grains), or tryptophan (corn), and higher in non-essential amino acids arginine, glycine, alanine and serine.

Others considerations: supply chain, consumer perception, taste, flexibility in formulation, sustainability, and nutrition

Nutrients in meat lacking in plant-based alternatives

Meat has important nutrients (vitamin D, calcium, iron, zinc, protein, and potassium).

Plant-based Alternative Meat: food safety

- Phenolic compounds (isoflavones): consumer endocrine system, cancer?
- Plant Food Allergy (oligosaccharides, proteins triggering immune response)
- Microbial Contaminants in food processing
- Health impact of the novel food when consumed as intended (dietary exposure to novel food)
- Product will only be allowed for sale if it is assessed to be of no food safety concern



ref: sgh.com.sg