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## Plant-based Alternative Meat: nutrition

Nutrient	Animal Sources	Plant Sources	Protein Content in Plant Alternatives
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>	TEMPEH SEITAN EDAMAME CHICKPEA MILK LENTILS 20g - 4oz 20g - 4oz 12g - ½ cup 10g - 1 cup 9g - ½ cup cooked
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	TOFU 8g - 4oz SOY MILK CHICKPEAS BEANS 8g - ½ cup 8g - ½ cup 8g - ½ cup dry
lodine	Cow's Milk (depending on farming practices)	lodised salt; Seaweed	
Iron	Liver; Muscles; Oysters; Beef	Beans; Quinoa; Pumpkin Seeds; Tofu; Chia seeds; Dried apricots; Fortified breakfast cereal; Kale; Lentils; Figs; Raisins	LIMA BEANS NUTS AMARANTH QUINOA OATS 6g - ½ cup 6g - ½ cup 5g - ½ cup 4g - ½ cup cooked 4g - 1/3 cup dry
Protein	Eggs; Chicken breast; Turkey; Lean Beef; Fish; Cottage cheese	Lentils; Oats; Beans; Peanuts; Chia seeds; Pumpkin Seeds; Tofu; Quinoa; Almonds; Chickpeas	www.realgoodeats.ca Choosing the right protein source
Vitamin A (animal foods), β-carotene (plant foods)	Eggs; Liver; Oily Fish	Mangoes; Carrots; Beetroot; Oranges; Peppers; Orange; Sweet potato	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
Vitamin D	Liver; Egg Yolks; Red meat; Oily Fish	Wild or ultraviolet-exposed mushrooms; Plant foods/drinks fortified with vitamin D	amino acids arginine, glycine, alanine and serine. Others considerations: supply chain, consumer perception, taste, flexibility in formulation, sustainability, and nutrition
Zinc	Beef; Lamb; Pork; Cheese	Cashew nuts; Beans; Quinoa; Pumpkin Seeds; Tofu; Fortified breakfast cereal; Kale; Lentils	Nutrients in meat lacking in plant-based alternatives Meat has important nutrients (vitamin D, calcium, iron, zinc, protein, and potassium).

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Adapted from KHNI

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## 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