Plant-Based Protein Sources

A varied plant-based diet can provide all the protein building blocks (amino acids) your body requires. The benefit of plant-based proteins (over animal-based) is that they are rich in other dietary micronutrients, phytonutrients and fibre which are absent in most animal-based sources of protein.

Role of protein

Proteins are essential for growth, repair, immune and hormone function. The building blocks of proteins are called amino acids, and there are 20. Nine are not made by the body and are called essential amino acids. Foods that contain all the essential amino acids are 'complete proteins'. Animal-based foods are complete proteins, but there are only a few plant-based sources: Quinoa, tofu, tempeh, amaranth, buckwheat, spirulina algae, chia seeds.

This not to say a plant-based diet cannot deliver quality protein, far from it.

Plant-based protein food

GRAINS

- **Types:** Quinoa, amaranth, oats, kamut, spelt, teff, wild rice.
- **Health properties:** Not only a source of protein but fibre, B vitamins for energy and nervous system health and minerals such as iron, zinc, selenium.
- **Preparation:** Soaking and sprouting grains improves their digestibility.

SOYA

- **Types:** Opt for fermented forms such as tempeh, miso, natto, sojasun yoghurts and soyami live cultured soya-based 'cream cheese'.
- **Preparation:** Fermented foods supply protein in a more digestible form as it deactivates phytic acid (an anti-nutrient that can block the absorption of vitamins and minerals).

NUTS AND SEEDS

- **Types:** Walnuts, pecans, cashews, Brazil nuts, macadamia nuts, hazelnuts, peanuts, pine nuts, chia seed, flax seed, pumpkin seed, sunflower seed, hemp seed, sesame seed, poppy seed.
- **Health properties:** Source of protein, healthy fats, B vitamins, minerals, phytonutrients, fibre — go for unsalted, unsweetened, raw.
- **Preparation:** Digestibility of nuts can be increased by soaking overnight in water or lightly steaming.

BEANS AND PULSES

- **Types:** Black beans, black-eyed peas, broad beans, cannellini, chickpeas, haricot beans, kidney beans, lentils, lima beans, mung beans, soybeans.
- **Health properties:** Maintain blood sugar, keep you feeling full, probiotic fibre, lower cholesterols, antioxidant protection and when combined with grains, they provide a complete protein source.
- **Preparation:** Ideally soak your own beans. The tinning process breaks down the protein and other nutrients — eat tinned beans sparingly.
- Add kombu strips (piece of kelp) when cooking to beans and chickpeas to enhance digestibility and neutralise goitrogens (a compound that interferes with hormones).

SEA VEGETABLES AND ALGAE

- **Types:** Nori, kelp, wakame, kombu, dulse, blue algae e.g. spirulina and chlorella.
- **Health properties:** Source of protein, iodine, minerals and chlorophyll.
- **Preparation:** Wrap around sushi, add powdered versions to smoothies and juices, grind to use a natural salt seasoning to dressings, stews and soups.

FRUIT AND VEGETABLES

- **Types:** Vegetables with the most protein include broccoli, spinach, asparagus, artichokes, potatoes, sweet potatoes and brussels sprouts. However, compared to other plant-based proteins sources the amount is relatively small (around 4–5 grams per cooked cup). **Green peas** have a good protein content and are used as a base for vegan protein powders and supplements.

  Fresh fruits generally have a lower protein content than vegetables. Those containing notable amounts include guava, mulberries, blackberries, nectarines and bananas, which have about 2–4 grams of protein per cup.

- **Health properties:** Fruit and vegetables are abundant in phytonutrients, antioxidants and anti-inflammatory compounds vital for supporting the immune system and rich in fibre.

Complementary proteins

Of the nine essential amino acids, lysine and methionine need consideration in plant-based diets. Compared with foods of animal origin, plants have an imbalance of either lysine or methionine. Wheat and rice proteins are comparatively low in lysine but better sources of methionine, whereas beans and peas are relatively high in lysine yet lower in methionine. This has led to the idea of cereals and legumes being 'complementary' proteins. This means that meal combining, for example, beans and rice or hummus and bread will provide a 'complete' protein intake.

It was thought until relatively recently that, as the body does not readily store amino acids, it was essential for vegetarians to combine complementary proteins at each meal. There has been some debate over this which has concluded that this isn't strictly necessary, however it still has some advantages and seems a sensible way to approach a varied and complete diet.

For further information, contact us at hello@eatforlife.co.uk.