Phyto-oestrogens are natural plant components that are structurally similar to oestrogens, and have very mild hormone-like effects when consumed. Phyto-oestrogens do not produce the full range of oestrogen-like actions, but instead are weakly oestrogen modulating by binding selectively to oestrogen receptors.

Classes of Phytoestrogens

There are three main classes of Phytoestrogens:

- **Isoflavones** (such as genistein and diadzein, found in high levels in soy beans and soy products such as tofu, tempeh and soy milk)
- **Lignans** (a constituent of dietary fibre and found mainly in nuts, seeds, grains, legumes, fruits & vegetables)
- **Coumestans** (found in sprouted beans eg. alfalfa & clover sprouts; split peas, pinto beans, lima beans)

Therapeutic Uses

It is possible to use Phyto-oestrogen foods therapeutically, for example a healthy diet high in plant-based foods, including phyto-oestrogen foods, has potential to decrease the severity & frequency of peri-menopausal symptoms, at a time when the body is producing less natural oestrogen.

There is also limited, suggestive evidence that soy foods may lower the risk of prostate, breast, and stomach cancer.

I hear conflicting information about phytoestrogens...

Despite this potential protective effect in otherwise healthy people, there is also some evidence that phytoestrogen foods might stimulate the growth of existing hormone-dependant cancers.

There is evidence to suggest that women with existing breast cancer or past breast cancer should be cautious in consuming large quantities of soy foods or phyto-oestrogen supplements.

The advice to avoid consumption of phyto-oestrogen foods to a woman in remission from breast cancer (ie: using Tamoxifen or another aromatase-inhibitor medication) is theoretical, as phyto-oestrogens such as genestein and diadzein may stimulate existing tumour growth and antagonise the effects of tamoxifen. There is no clinical evidence to definitively confirm this, but for further reading please refer to the Cancer Council position statement below.

The Cancer Council supports the consumption of soy foods as a part of the diet. The Cancer Council does not recommend or support the use of supplements such as soy protein isolates or capsules for healthy people to prevent cancer. The Cancer Council does not recommend the use of soy supplements for breast cancer survivors.
**Dietary sources of Phytoestrogens**

- **Soy** products are the richest natural source of phytoestrogens. Of these soy beans have the highest concentration, followed by soy nuts, tofu, soy yoghurt, soy milk, tempeh and miso soup (in descending order). Choose organic soy products whenever possible, and avoid the addition of sweeteners in soy milks and yogurts.

- **Other Legumes**. Mung bean sprouts have the highest concentration. Chickpeas when consumed as hummus have particularly high amounts of lignans due to the inclusion of both sesame seeds and garlic. Black bean sauce has significant amounts of isoflavones, daidzen and genistein. Other legumes have negligible amounts of phytoestrogens.

- **Sprouted seeds and legumes**. Mung bean, clover, alfalfa and soy beans when sprouted offer a substantial amount of phytoestrogens as well as many bioavailable nutrients.

- **Seeds** especially linseed, are rich sources of lignans. Grind freshly to use in smoothies, cereal and baking. Sesame seeds also have particularly high amounts and can be included as tahini or roasted with sea salt to make the Japanese 'gomasio'.

- **Vegetables** – garlic is relatively high in isoflavones, making an easy phytoestrogen boost to any meal. Squash also contains a reasonable amount.

- **Fruits** highest in phytoestrogens are dried apricots, dried dates, dried prunes, peaches and strawberries (in descending order).

- **Grain** breads offering some phytoestrogens are multigrain - particularly soy linseed and rye bread.

- **Culinary Herbs** such as parsley, dill, fennel seeds, aniseed, sage and red clover can significantly boost the phytoestrogen content of a meal or can be used for tea.

- **Tea**, particularly green tea has phytoestrogenic compounds.

- **Black licorice** contains substantial amounts of isoflavones.

References:
High Phytoestrogen Meal Ideas

**Breakfast**
- Quinoa and dried apricot Bircher served with soy yogurt and ground LSA.
- Soy milk smoothie with strawberries, banana, linseed meal
- Sourdough Soy and Linseed toast with unhulled tahini, raw honey and banana.
- Sourdough rye toast with avocado, alfalfa sprouts and a gomasio sprinkle.
- Soy yoghurt with soaked prunes, toasted sunflower seeds and coconut flakes.

**Lunch**
- Miso and seaweed soup with fresh tofu.
- Tempeh burger with fresh herb salad and Iku tahini dressing.
- Ryvita with hummus, avocado, tomato and parsley.
- Warm roast squash, garlic and chickpea salad.
- Quinoa salad with alfalfa/ clover/ sunflower sprouts and a tahini dressing.
- Falafel with tabouli and hummus.
- Rye sandwich with avocado, fresh goat’s cheese and alfalfa sprouts.

**Dinner**
- Indian lentil curry on brown rice with sunflower seeds.
- Sesame crusted fish with a collard green and mung bean stir-fry.
- Buckwheat / spelt pasta with tofu bolognase sauce.
- Lentil and squash soup with soy/ linseed toast.
- Tofu and Asian greens in an organic black bean and garlic sauce.
- Roast vegetable (inc. squash) salad with goat’s cheese and a garlic and olive oil dressing.

**Snacks**
- Roasted soy nuts
- Miso soup (from organic paste)
- Edamame beans
- A peach or some strawberries
- Blissball with tahini, sunflower seeds, dried apricots and dates.
- Black licorice root
- Rye toast with hummus
- Red clover tea, Sage tea, and Green tea