

# What's in Soya?



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**PFNDAI**

- Soy comes from the soy bean pods
- Glycine Max →Pea family (Fabaceae).
- Legumes → naturally high in protein & relatively low in fat.



- Contains all the essential amino acids in adequate amounts for human nutrition
- Green, black, yellow, or white.



# Soybean Oil

Soybean  
Cleaning

Flaking &  
Conditioning

Extracting

Refining

Nutrients	Amount/ 100g
Energy	884 Kcal
Saturated Fat	16g
Monounsaturated fat	23g
Polyunsaturated fat	58g
Protein	0g
Carbohydrate	0g



# Soy Milk

Soaking  
soybeans (4-  
12 hrs.)

Grinding  
soaked  
soybeans

Boiling of  
slurry  
(15-20 mins)

Filtration

- Used as a substitute for dairy milk by individuals who are vegan or lactose intolerant.



Nutrients	Amount/100g
Energy	33kcal
Protein	2.8g
Total Fat	2g
Carbohydrate	1.8g

# Tofu

Preparation of Soymilk



Coagulation of the Soymilk → Curds



Pressing of the Tofu Cakes

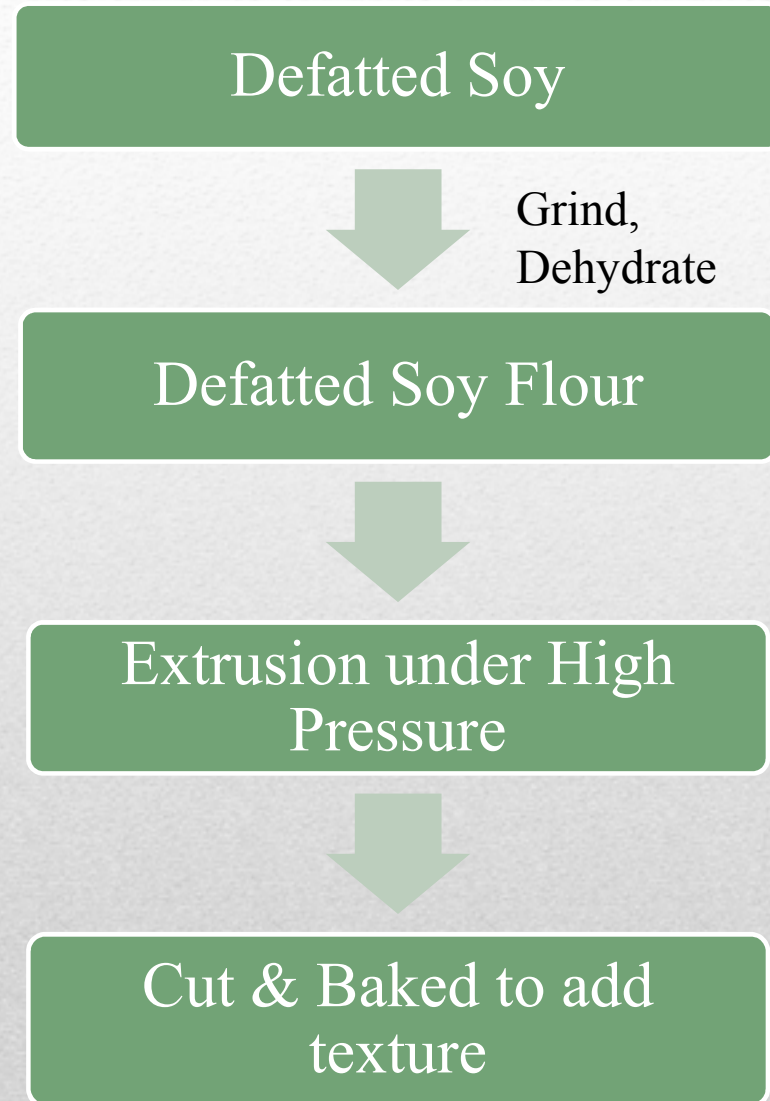
Nutrients	Amount/ 100g
Energy	76 Kcal
Protein	8 g
Total Fat	4.8 g
Carbohydrate	1.9 g



# Textured Soy Protein (TSP)

- By- product of extracting Soybean Oil
- Defatted Soy Flour Product
- Used as meat substitute
- Available as Soya granules/ Soya Chunks/ Soya flakes

<b>Nutrient</b>	<b>Amount</b>
Energy	588Kcal
Protein	53g
Carbohydrates	35g
Fat	12g



## **Soya Chunks**



## **Soya Granules**



# Health Benefits- Heart Conditions

- Soy has many Health Benefits coming from the health promoting phytochemicals- isoflavones and polyphenols.
- Several studies suggest that soy may exert lipid lowering effect, especially “bad” LDL cholesterol due to the isoflavones.
- Soy foods are a great alternative to meat. Unlike many sources of animal protein, soy is low in saturated fat and naturally cholesterol free. Soy protein works directly lower blood cholesterol levels.
- Also, soy foods contain essential polyunsaturated omega-3 fats that are linked to a lower risk of cardiovascular disease.
- *In an extensive review of 35 studies, researchers found that eating soy products reduced LDL cholesterol and total cholesterol while raising “good” HDL cholesterol. These improvements were greater in people with high cholesterol levels. It has been estimated that soy protein diets must contain 1.5mg isoflavones/g soy protein to provide the cholesterol lowering effects in humans.*



# Post Menopausal Symptoms

- Isoflavones resemble to the Hormone Estrogen, hence they are commonly called Phytoestrogen (Plant Estrogen)
- Phytoestrogen can bind to estrogen receptors in the body, although with low affinity & have biological activities in the body that often times mimic that of estrogen.
- Post menopausal symptoms- increased risk of breast cancer, CVD, bone density loss- osteoporosis

# Osteoporosis

- Isoflavones have shown to significantly increase bone mineral density in women.
- Prevent postmenopausal osteoporosis and improve bone strength thus decreasing risk of fracture in menopausal women.
- 90-100mg/ day- safe & effective for postmenopausal symptoms
- *Several large, human studies—in which thousands of women have been followed for many years, consistently show that compared with women who do not eat soy, women who regularly eat soy have lower breast cancer risk. Some of these studies also suggest that breast cancer survivors who consume soy foods have a lower risk of breast cancer recurrence compared with survivors who avoid soy*

# Breast Cancer

- Several large, human studies—in which thousands of women have been followed for many years, consistently show that
  - compared with women who do not eat soy, women who regularly eat soy have lower breast cancer risk.
  - breast cancer survivors who consume soy foods have a lower risk of breast cancer recurrence compared with survivors who avoid soy.
- *Studies have shown that among women with breast cancer, soy food consumption was significantly associated with decreased risk of death and recurrence.*

Thank  
You...!!!