

# PLANT-BASED PROTEIN OPTIONS

The following is for reference purposes only. Be mindful of portion sizes for any individual restrictions and consulting with a Registered Dietitian, Kidney Specialist and your Healthcare Team is always recommended.

### Higher Protein and Higher Potassium and Phosphorus Sources per portion size indicated

(May be suitable for those without potassium or phosphorus restrictions)

Plant-based	Serving	Nutrition and Cooking Tips
protein sources		
Textured	¼ cup	Made from soybeans and often used as meat substitute in plant-based
vegetable protein		products often on the market (for example, veggie ground)
(TVP)		<ul> <li>Cooking Method: Rehydrate in hot water prior to using and</li> </ul>
		ensure all liquid is absorbed well. Add seasonings and use in a
		variety of recipes such as for taco fillings, or mini patties.
		Nutrition Fact (varies according to brands and product)
		Approximately per serving (¼ cup): Protein 13 g, Potassium 600 mg or
		more, Phosphorus 16% daily value, Fibre 5g
		*Caution with portion sizes given higher potassium and phosphorus content for those with restrictions.
Tempeh	¼ cup	Made from fermented soybeans with a firm texture, and mild tasting
		- Cooking method: Simmer tempeh in a flavorful broth. It can
		be crumbled, steamed, seared, or stir-fried and used in stews or braising.
		Nutrition Fact (varies according to brands and product)
		Approximately per serving: (¼ cup cooked)
		Protein 7-9 g, Potassium 166-171mg, Phosphorus 106- 110 mg
		*Caution with portion sizes given higher in potassium and
		phosphorus content for those with restrictions
		For reference - ½ cup cooked Tempeh - Protein 15-17 g, Potassium
		333-342 mg, Phosphorus 212-221 mg
Seitan	¼ cup	Made from wheat gluten.
		*Caution potassium and phosphorus content may vary based on
		portions and when used in large amounts.

# Nutrition Fact (varies according to brands and product for vital wheat gluten flour)

Approximately per serving (¼ cup or 30 grams):

Protein 22- 23 g, Potassium 24- 30 mg, Phosphorus 78 mg Recipe source: Wiley Online Library – Dialysis and Transplantation

#### **SEITAN WITH MARINADE**

Makes 8 servings.

Gluten Balls

- 2 cups high gluten flour
- 1 ½ c water
- 6 c low sodium vegetable broth

#### Marinade

- 1 tsp red wine vinegar
- 1/2 tsp molasses
- dash ground pepper
- dash garlic powder
- 1/2 cup water
- 1/2 cup virgin olive oil
- 1/4 cup Dijon mustard
- dash hot sauce

#### Instructions

- 1. To make the seitan, mix wheat gluten with water and stir until the wheat gluten mixture becomes a ball. Knead for 5 minutes. Divide the dough into 2 equal balls.
- 2. In a large stockpot cover the gluten balls with 6 cups of broth. Bring to a boil and then turn down the heat and simmer for 1–1/2 to 2 hours. Remove from the heat and set aside to cool. Slice the dough into steaks and place in large baking dish.
- 3. Place the wine vinegar, molasses, ground pepper, garlic powder, water, olive oil, mustard, and hot sauce in a blender until smooth. Pour over the seitan and marinate for at least 2 hours.
- 4. Slices of seitan can be used as a substitute for animal meat and grilled over a charcoal barbeque, on a stovetop, or even baked. If not used immediately, store the seitan in the broth in the refrigerator or drain and freeze.

**Nutritional information per serving for recipe above**: Protein 23g, Sodium 222 mg, Potassium 31 mg, Phosphorus 78 mg

Edamame	½ cup cooked	<ul> <li>Immature soybeans that are often found shelled or unshelled in the pods. A good source of fibre to add with meals or snacks if appropriate.         <ul> <li>Cooking Method: Can be boiled both shelled and unshelled to snack on, add in soup or served with rice and other side dishes.</li> </ul> </li> <li>*Caution with portion sizes and being higher in potassium content for those with restrictions.</li> <li>Nutrition Fact (varies according to brands and product)</li> <li>Approximately per ½ cup serving: Protein 8-10 g, Potassium 338 mg, Phosphorus 131 mg, Fibre 4g</li> </ul>

### Good Source of Protein and Moderate Potassium and Phosphorus content per portion size indicated

Consult with Kidney Specialist, Registered Dietitian for appropriate portion recommendations and if restrictions are required prior to including in meals)

Plant-based protein sources	Serving	Nutrition and Cooking Tips
Tofu: Soft and Silken	½ cup	Tofu is made from coagulating soy milk. The soft and silken texture will break apart easily.  - Cooking Method: Ensure to drain excess liquid prior to using. It is best used in smoothies or soups  *Read labels as nutrition content may vary between brands for phosphate and calcium additives if restrictions are needed Recipe idea:  - Peach Raspberry Smoothie (https://www.kidneycommunitykitchen.ca/kkcookbook/reci
		pes/peach-raspberry-smoothie/)

Tofu: Medium Firm	½ cup	The medium firm texture will have some visible curds, it may crumble easier if stir frying too roughly, or deflate when pan frying.  - Cooking method: Try to press and drain before cooking, it would be best used in braising, boiling, and baking recipes  Nutrition Fact (varies according to brands and product)  Approximately per ½ cup serving: Protein 8-10 g, Potassium 150 mg, Phosphorus 120 mg  Recipe ideas:  - Eggplant and Tofu Stir-Fry – Kidney Community Kitchen  - Pan Fried Tofu with Egg and Chive (https://kitchen.kidneyfund.org/recipe/pan-fried-tofu-with-eggs-and-chive/)
Tofu- Firm	1/4 cup	A solid texture with tight curds that will hold up during more vigorous cooking techniques.  - Cooking method: Make sure to press and drain well before using. It is an excellent choice for pan frying and stir frying Recipe ideas:  - Vegan Breakfast Scramble https://kidneyrd.com/vegan-breakfast-scramble/ (Tip: Feel free to add in extra vegetables of choice)  - Sheet Pan Tofu Asparagus (https://sweetsimplevegan.com/2019/09/sheet-pan-tofu-asparagus/)  - Vegan Tofu Taco Crumbles (https://itdoesnttastelikechicken.com/vegan-tofu-taco-crumbles/)
Tofu - Extra Firm	1⁄4 cup	Very compact texture  - Cooking method: Pressed, drained, or frozen before using. It is best suited for baking, pan-frying or stir frying, deep-frying or air frying, or adding a glazing sauce  Nutrition Fact (varies according to brands and product) Approximately per ¼ cup serving: Protein 8-10 g, Potassium 150 mg, Phosphorus 120 mg
Soy milk	½ cup	Nutrition Fact (varies according to brands and product) Approximately per ½ cup serving: Protein 4 g, Potassium 144 mg, Phosphorous 110 mg *Caution with reading labels for phosphate additives and being mindful of portion recommendations for those with restrictions

Chickpeas	½ cup cooked	An alternative to consider for added fibre and some protein with meals  Nutrition Fact (varies according to brands and product)  Approximately per serving (½ cup cooked unsalted):  Protein 7-8 g, Potassium 173 mg, Phosphorus: 48 mg (estimated absorbed) mg, Fibre 6-7g  Recipe idea:  Curried Chickpea Salad - Spice it up! (myspiceitup.ca)  Eggplant & Chickpea Bites - Kidney Community Kitchen
Bulgur	1 cup cooked	Grains and starches alternative with a source of fibre  Nutrition Fact (varies according to brands and product)  Approximately per serving (1 cup cooked): Protein 6 g Potassium  123.8 mg, Phosphorous 72.8mg, Fibre 8-9 g  *Caution with portion sizes for potassium and phosphorus content

Lower Protein Sources and Moderate Potassium and Phosphorus content per portion size indicated

(Consult with Kidney Specialist, Registered Dietitian for appropriate portion recommendations and if restrictions are required prior to including in meals)

Plant-based	Serving	Nutrition and Cooking Tips
protein sources		
Fava (Broad)	¼ cup	A way to add some fibre and protein in your recipes. Try using it with
Beans		stews, soups and toppings for salads, and side dishes where
Blacked eyed		appropriate portions are recommended.
peas		Nutrition Fact (varies according to brands and product)
Mung beans		Approximately per serving (¼ cup): Protein 3-4 g, Potassium 114-153
Black beans		mg, Phosphorus 27- 34 mg (estimated absorbed), Fibre 2-6g
		Note: Phosphorus content naturally occurring in these sources are
		not as readily absorbed compared to inorganic phosphate additives
		containing products.
<b>Great Northern</b>	¼ cup	Nutrition Fact (varies according to brands and product)
beans		Approximately per serving (¼ cup cooked unsalted): Protein 3-4 g,
Navy Beans		Potassium 150-187mg, Phosphorus 30-45 mg (estimated absorbed),
<b>Kidney Beans</b>		Fibre 3-5 g
Lentils		
Pinto Beans		

Lima Beans		*Choose smaller portion size (approx ¼ cup) can help manage potassium and phosphorus levels if it is a concern as recommended by healthcare professional.  Recipe idea: Red Lentil Dahl – Kidney Community Kitchen
Split peas	¼ cup	Nutrition Fact (varies according to brands and product) Approximately per serving (¼ cup cooked unsalted): Protein, 3-4 g, Potassium 170- 175mg, Phosphorus 48-50 mg, Fibre 3-4 g *Caution with portion sizes for potassium and phosphorus content.
Quinoa	1/2 cup cooked	Nutrition Fact (varies according to brands and product) Approximately per serving (½ cup cooked): Protein 4 g, Potassium 159 mg, Phosphorus 140-150mg  *Caution with portion sizes for potassium and phosphorus content
Hemp Hearts	1 Tbsp	Sprinkle a small amount on top of salads, adding into smoothies, or using a small amount in baking as an additional source of fibre and protein.  Nutrition Fact (varies according to brands and product)  Approximately per serving: Protein 3.3 g, Potassium 116.6 mg, Phosphorus 150 mg, Fibre: not a significant source  *Caution with portion sizes for potassium and phosphorus content
Pumpkin or squash seeds, without shell	2 Tbsp	Nutrition Fact (varies according to brands and product) Approximately per serving size (2 Tbsp): Protein 4-6g, Potassium 116-117 mg, Phosphorous 172- 338 mg
Sunflower seeds, without shell  *Choose unsalted		Approximately per serving size (2 Tbsp): Protein 3-4 g, Potassium 135 mg, Phosphorous 187- 197 mg, Fibre 1-2 g  *Caution with portion sizes given high potassium and phosphorus content
Nutritional Yeast	2 Tbsp	Deactivated yeast with a cheesy and nutty flavour as a dairy free alternative.  Nutrition Fact (varies according to brands and product)  Approximately per serving (2 Tbsp): Protein 4-5g, Potassium 190-198mg, Phosphorus: 80mg, Fibre: 2g  *Caution with portions for potassium content and any other contraindication medical conditions is recommended to consult with healthcare professional.  Recipe idea: Dairy Free Cheesy Sauce (https://www.davita.com/diet-nutrition/recipes/sauces-seasonings/dairy-free-cheesy-sauce)

## Lower Protein Sources and Low to Moderate Potassium and Phosphorus content per portion size indicated

Plant-based	Serving	Nutrition and Cooking Tips
protein sources		
Nuts (Pecans/	2 Tbsp	Consider choosing unsalted and frequency of intake
Walnuts/Macada		*Caution with using smaller portions for those with restrictions.
mia)		Nutrition Fact (varies according to brands and product)
		Approximately per serving size (2 Tbsp): Protein 1-2 g, Potassium 52-
		62 mg, Phosphorus 32-44mg
Couscous	1 cup	A great substitute for rice or other starches to add some fibre and
	cooked	protein to your meals.
		Nutrition Fact (varies according to brands and product)
		Approximately per serving (1 cup): Protein 5-6g, Potassium 92 mg,
		Phosphorous 34-35 mg, Fibre 2-3g
		Recipe idea: Couscous Salad
		(https://www.kidneycommunitykitchen.ca/kkcookbook/recipes/cou
		scous-salad-with-honey-lemon-dressing/)
<b>Ground Flaxseed</b>	1 Tbsp	Add to baking, smoothies, or sprinkle on top of oatmeal for some
		added fiber.
		Nutrition Fact (varies according to brands and product)
		Approximately per serving (1 Tbsp): Protein 2 g, Potassium 89 mg,
		Phosphorus 53 mg, Fibre 1-2g
Peanut butter/	1 Tbsp	Nutrition Fact (varies according to brands and product)
Nut Butter		Approximately per serving (1 Tbsp) and will vary depending on
		brands: Protein 3-4 g, Potassium 89-90 mg, Phosphorus 53-54 mg
		*Caution with portion sizes and frequent intake for potassium and
		phosphorus content
Barley	1 cup	Try adding it into salad and soups for added source of fibre.
	pearled	Nutrition Fact (varies according to brands and product)
	cooked	Approximately per serving (1 cup cooked) Protein 3-4 g, Potassium
		146 mg, Phosphorus 84-86 mg, Fabre 5-6g
		Recipe idea: Roasted Vegetable and Barley
		(https://www.themediterraneandish.com/roasted-vegetables-
		barley-recipe/print/15566/)
		( <b>Tip:</b> Consider less feta cheese and pine nuts as optional toppings to
		lower potassium, sodium, and phosphorus content)

#### References:

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- 9. Top Low Phosphorus Foods for a Healthy Kidney Diet

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https://www.unlockfood.ca/en/Articles/Protein/Your-Challenge-%E2%80%93-Choose-Nuts-and-Seeds-More-Often!.aspx

- 11. Kidney Diet Tip: Choosing the best milk substitute https://blogs.davita.com/kidney-diettips/kidney-diet-tip-choosing-the-best-milk-substitute/
- 12. Beans and Peas in Your Kidney Diet

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The Kidney Foundation would like to thank Karen Sevong MScFN RD CDE, for researching and submitting this content.