

Plant based diets and AKU

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Outline

- Overview of plant-based diets and AKU
- Use of plant-based meat alternatives in AKU
- Cooking with beans and pulses
- The LIBRO app

PLANT-BASED DIET - OVERVIEW

Plant based \approx vegan diet

- Based on:
 - Legumes (beans, lentils, chickpeas, soyabeans)
 - Soya products (tofu, tempeh)
 - Nuts and seeds
 - Grains (bread, pasta, rice, quinoa)
 - Potatoes
 - Fruit and vegetables
 - Herbs and spices
 - Plant oils
 - *(Plant based meat alternatives)*

Benefits of plant based

- General health benefits:
 - Heart health
 - Improved gut health
 - *Diabetes risk*
 - *Cancer risk*
 - Environmental
- AKU benefits
 - Weight management
 - Protein allowance goes further

Meat-veg-potato vs plant-based meal

- 4 slices (150g) roast beef
- 160g roast potatoes
- 180g broccoli



- 200g sweet and sour chickpeas
- 160g boiled rice



Meat-veg-potato vs plant-based meal

- 4 slices (150g) roast beef **45g**
- 160g roast potatoes **4g**
- 180g broccoli **not counted**
- Gravy (**minimal protein**)

TOTAL PROTEIN 49g

- 200g sweet & sour chickpeas **14g**
- 160g boiled rice **6g**

TOTAL PROTEIN 20g



Disadvantages of plant-based diet

- Provision of micronutrients:
 - Vitamin B12
 - Iron
 - Omega 3 fatty acids
- Especially in AKU:
 - Calcium and Vitamin D

Disadvantages of plant-based diet

- Provision of micronutrients:
 - Vitamin B12 – include fortified foods such as marmite, breakfast cereals, grapenuts
 - Iron – include a source of vitamin C
 - Omega 3 fatty acids – include flax, walnuts
- Especially in AKU:
 - Calcium and Vitamin D

Disadvantages of plant-based diet

- Getting all the essential amino acids
 - Rice low in lysine
 - Legumes low in methionine

Which has the most protein?

- 25g of chicken breast
- 40g beef
- 40g salmon
- 100g of chickpeas
- 130g of baked beans

Which has the most protein?

- 25g of chicken breast = 7g of protein.
- 40g beef = 11g of protein
- 40g salmon = 7g protein
- 100g of chickpeas = 7g of protein
- 130g of baked beans = 7g of protein

PLANT-BASED MEAT

Plant based meat

Can be made from

- soybeans, peas, legumes,
- wheat and other grains,
- fungus, such as mycoprotein,
- vegetables.

Protein content depends on the protein source.

Large variation - important to check the label

Product	Swaps	Product examples
Burgers		
Regular beef burger (meat)	21g protein (3 x 7g swaps per burger)	Quarter pounder beef burger (≈90g)
Soy-based (beef-style)	14g protein (2 x 7g swaps per burger)	-Tesco Plant Chef -Plant Pioneers Ultimate Plant Burger -Asda plant-based meatballs • (82g=13g protein)
Pea-based (beef-style)	14-21g protein (2 - 3 x 7g swaps per burger)	-Beyond Burger -Meatless Farm -This Isn't Beef Burgers
Wheat-based (chicken-style)	14g protein (2 x 7g swaps per burger)	-Beyond Burger Chicken style -Birds Eye Vegan Chicken free Burgers
Mycoprotein burger (Quorn)*	10-18g protein (1½ - 2½ x 7g swaps per burger)	-Quorn Vegan Crunchy Fillet Burgers
Vegetable-based (veggie burger)	4g protein (2 x 2g swaps per burger)	-Strong Roots Pumpkin & Spinach Burger -Morrisons Plant Revolution Vegetable Burger



Sausages		
Thick sausage (meat)	21g protein (3 x 7g swaps per 2sausages)	~2x regular pork sausages (2 x 57g sausages)
Soy-based	14-18g protein (2 – 2½ x 7g swaps per two sausages)	-Tesco Plant Chef Herby Bangers -Morrisons Plant Revolution Meat Free Sausages
Pea-based	10-18g protein (1½ - 2½ x 7g swaps per two sausages)	-Beyond Meat Plant Based Sausage -Birds Eye Green Cuisine Vegan Sausages
Vegetable-based (veggie sausage)	3-7g protein (1-3 x 2g swap per two sausages)	-Plant Based by ASDA Leek, Carrot & Sweet Potato Sausages

Mince-style		
Mince beef (meat)	22g protein per 100g (3 x 7g per 100g)	5% Fat Beef Mince
Soy-based	18-24g/100g (2½-3½ x 7g swaps per 100g)	-Tesco Plant Chef Meat Free Mince -Plant Pioneers Meat Free Mince
Mycoprotein mince (Quorn)*	13g (2 x 7 g swaps per 100g)	-Quorn Mince

*Not all Quorn products are vegan

Checking the labels

Ingredients

INGREDIENTS: Reconstituted **Soya Protein (47%)**, Water, Rapeseed Oil, Shea Fat, Rice Flour, Maize Flour, **Soya Protein Concentrate**, Pea Fibre, Stabiliser (Methyl Cellulose), **Colours** (Plain Caramel, Beetroot Red), Coconut Oil, Salt, Yeast Extract, Flavouring, Smoked Rice Flour, Black Pepper, Maltodextrin, Maize Starch, Modified Tapioca Starch, Sugar, Onion, Dextrose.

Ingredients

Water, **Wheat Flour**, **Wheat Gluten (10%)**, Faba Bean Protein (6%), Modified Corn Starch, Flavouring, Rapeseed Oil, Stabilisers (Methylcellulose, Cellulose), Pea starch, Coconut Oil, Colour (Calcium Carbonate), Salt, Corn Starch, Rice Flour, Yeast Extract, Garlic Powder, Onion Powder, Pea Protein*, Raising Agents (Diphosphates, Sodium Carbonates), Sunflower Oil, Dried Yeast, Sugar, Spices and Herbs, *Peas are Legumes

Nutritional Information

Typical Values	Per 100g	One burger (105g**)
Energy	842kJ / 202kcal	885kJ / 212kcal
Fat	11.5g	12.1g
Saturates	3.1g	3.3g
Carbohydrate	9.7g	10.2g
Sugars	0.7g	0.7g
Fibre	6.0g	6.3g
Protein	12.0g	12.6g
Salt	1.06g	1.1g
* Reference intake of an average adult (8400 kJ / 2000 kcal)	-	-
When grilled according to instructions.	-	-
** When grilled according to instructions 226g typically weighs 210g.	-	-

Plant-based milks alternatives

Type	Protein (g) per 200ml*
Soya	7g protein (1 x 7g swap)
Oat	2g protein (1 x 2g swap)
Almond	2g protein (1 x 2g swap)
Hazelnut	1g protein ($\frac{1}{2}$ x 2g swap)
Cashew	1g protein ($\frac{1}{2}$ x 2g swap)
Rice	free food
Hemp	free food
Coconut	free food
Dairy (full)	7g protein (1 x 7g swap)
Dairy (semi)	7g protein (1 x 7g swap)
Dairy (skimmed)	7g protein (1 x 7g swap)

Product	Swaps	Product examples
Cheddar cheese (dairy)	25g protein per 100g (3½ x 7g swap per 100g)	Mild cheddar cheese
Cream cheese (dairy)	5g protein per 100g (1 x 7g swap per 100g)	Full fat cream cheese
Coconut-oil based hard cheese	Free food	-Cathedral City Dairy Free Block -Applewood Vegan Smoky -Violife Smoky Cheddar
Nut-based cheese	7g protein per 100g (1 x 7g swap per 100g)	-Nush Almond Cheese Spread

Tofu	Tempeh	Jackfruit
<p>Made by curdling soya milk and compressing to solid blocks.</p> <p>Use in noodles, curries, rice dishes, blended in sauces, to create desserts.</p> <p>Popular in East and Southeast Asian cuisines.</p>	<p>Made by fermenting soybeans and compressed into patties.</p> <p>It is traditionally used in Indonesian cooking.</p> <p>It is higher in protein than tofu.</p>	<p>Jackfruit grows in Asia, Africa, and South America.</p> <p>Can be used in place of meat in curries.</p> <p>Popular in place of pulled meat due to its unique texture.</p> <p>It is very low in protein!</p>
<p>Silken (soft) tofu 5g protein per 100g (≈ 1 x 7g swaps per 100g)</p> <p>Regular (firm) tofu: 16g protein per 100g (≈2 x 7g swaps per 100g)</p>	<p>Tempeh: 21g protein per 100g (3 x 7g swaps per 100g)</p>	<p>Protein-free food!</p>

Summary

- Beans/ pulses/ legumes
 - Lower in protein than meat
 - Lots of health benefits
- Plant based meat alternatives:
 - Some are high in protein, fat and kcal
 - Others can be helpful to add variety and reduce protein
- Other traditional foods:
 - Can be useful/ eating out.



Vegan Recipes

Chickpea Coconut Curry

Serves: 4

Ingredients:

- 1 tbsp coconut oil or olive oil
- 1 onion, chopped
- 3 garlic cloves, minced
- 1 tbsp grated ginger
- 1 tbsp curry powder
- 1 can (400ml) coconut milk
- 1 can (400g) chickpeas, drained
- 1 cup diced tomatoes (fresh or canned)
- 2 cups spinach
- Salt & pepper to taste
- Fresh coriander + lime juice for garnish

Instructions:

- In a large pan, heat oil. Sauté onion until soft.
- Add garlic, ginger, and curry powder. Cook for 1 minute.
- Stir in coconut milk, tomatoes, and chickpeas. Simmer for 15–20 minutes.
- Add spinach and cook until wilted.
- Season, garnish, and serve with rice



CALORIES: 550kcal

PROTEIN: 14gp

Vegan Bean Burger

Ingredients:

- 1 can (400g) black or kidney beans, drained
- ½ small onion, finely chopped
- 1 small carrot, grated
- 2 cloves garlic, minced
- 1 tbsp tomato paste
- 1 tsp smoked paprika
- ½ tsp cumin
- ¼ cup breadcrumbs
- Salt & pepper to taste
- Olive oil for pan-frying

CALORIES: 350kcal
PROTEIN: 13gp



Instructions:

- Mash beans in a large bowl (leave some chunks for texture).
- Add onion, carrot, garlic, tomato paste, spices, and breadcrumbs. Mix well.
- Form into 4 patties and chill in the fridge for 20–30 minutes (helps them hold shape).
- Heat olive oil in a pan and cook patties 4–5 minutes per side until browned.
- Serve on buns with lettuce, tomato, and vegan mayo or mustard.

Lentil Soup

Serves: 4

Ingredients:

- 1 cup (200g) dried brown or green lentils, rinsed
- 1 medium onion, finely chopped
- 2 carrots, diced
- 3 garlic cloves, minced
- 2 bay leaves
- 1 tsp dried oregano or thyme
- 1 tsp cumin
- 1 can (400g) crushed tomatoes or 2 fresh tomatoes, chopped
- 4 cups vegetable broth or water
- 2 tbsp olive oil (plus extra for drizzling)
- 2 tbsp red wine vinegar (for serving)
- Salt and pepper to taste



Instructions:

- **Sauté base:**
In a large pot, heat olive oil. Add onion, garlic, and carrots. Cook for 3–4 minutes until softened.
- **Add lentils & flavour:**
Stir in lentils, bay leaves, oregano, cumin salt, and pepper.
- **Simmer:**
Add crushed tomatoes and vegetable broth. Bring to a boil, then reduce heat to low. Cover and simmer for about **30–35 minutes**, stirring occasionally, until lentils are tender.
- **Finish:**
Taste and adjust seasoning. Remove bay leaves.
- **Serve:**
Drizzle with extra olive oil and a splash of red wine vinegar
Serve with crusty bread

CALORIES: 370 kcal

PROTEIN: 17gp

Plant-Based Meatball Wrap

Serves: 1

5 plant-based meatballs (ready made from the supermarket)

1 tortilla (~60g)

Air fry/oven: cook the plant-based meatballs according to the cooking instructions.

Serve with:

25g hummus (reduced fat) or plant-based yogurt

Chopped cucumbers, tomatoes, red onion, and lettuce

Calories: 350kcal

Protein : 20gp



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Take-Home Tips

❖ Add more veg if you like 🥬 🍄 🥦 🥕

You can easily add peppers, courgette, cauliflower, spinach, or other veggies to increase volume, color, and flavor — without adding much protein.

❖ Freeze leftovers in portions ❄️

This makes it easy to have ready meals and helps avoid accidentally eating larger portions than planned.

❖ Spice it your way 🌿 🧄 🌶️

Herbs, spices, garlic, ginger, and a splash of lime or vinegar add lots of flavor without adding protein or salt.

❖ Batch cook for the week 👩🍳 🍲 👨🍳

Cooking a few portions at once saves time and ensures you have low-protein meals ready whenever you need them.

❖ Pair wisely 🍚 🍝 🍞

Serve your dishes with rice, pasta, or bread to make meals more filling while keeping protein controlled.

❖ Enjoy and relax! 😊 😎 Eating plant-based meals can be tasty. Take your time to enjoy your meal and discover new flavors.

Questions

