Protein for Omnivore and Plant-Based Diets

Protein and Muscle: What Recent Research Adds — Older adults may benefit from additional protein to help preserve muscle and physical function. In a 12-week randomized trial of 72 adults aged 65 and older, participants following a self-selected vegan diet consumed less protein and lost more thigh muscle volume and appendicular lean mass than those continuing an omnivorous diet. Resistance exercise reduced—but did not eliminate—the muscle loss and supported muscle protein synthesis.

The findings reinforce the value of intentionally planning protein intake and including resistance exercise when adopting a fully plant-based diet. Because the study was short-term and participants selected their own foods, it does not show that every well-planned vegan diet will have the same results.

For healthy older adults, geriatric nutrition experts suggest **1.0 to 1.2 g/kg/day**. Some older adults following a fully plant-based diet may benefit from roughly **1.2 to 1.4 g/kg/day**. Individual needs vary; people with kidney disease or other medical conditions may wish to consult a clinician or registered dietitian.

Protein Comparison for Adults Over 65

Diet Type	Recommended Daily Protein Intake (Age 65+)	Example for a 70 kg (154 lb) Adult
Omnivore	1.0 to 1.2 g/kg/day	~70 to 84 grams
100% Plant-Based	1.2 to 1.4 g/kg/day	~84 to 98 grams

Practical target: For a 154-pound (70 kg) adult over 65, 84 to 98 grams per day may translate to about **6 to 8 servings** of protein-rich plant foods, plus smaller amounts from other foods.

One higher-protein plant serving typically provides about 9 to 15 grams of protein.

High-Protein Plant Servings (about 9–15 g protein each)

- **Legumes:** 1 cup lentils, chickpeas, beans, or peas
- **Soy:** 3–4 oz tofu, 1/2 cup tempeh, or 1 cup edamame
- **Nuts and seeds:** 1/4 cup peanuts or pumpkin seeds, or 3 Tbsp hemp seeds
- **Whole grains:** 1.5–2 cups quinoa or wild rice, or 2 slices high-protein bread

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Sample Day: About 7 Protein-Rich Servings

- **Breakfast:** oatmeal, soy milk, and hemp seeds (2 servings; ~23 g)
- **Lunch:** chickpea and quinoa bowl (2 servings; ~22 g)
- **Snack:** peanuts or pumpkin seeds (1 serving; ~9 g)
- **Dinner:** tofu stir-fry with brown rice (2 servings; ~20 g)

Other foods provide additional protein and may bring this sample day into the suggested range.

Plate Model



One plate option is to include a generous portion of colorful vegetables, such as broccoli, bell peppers, cucumbers, tomatoes, and kale, along with protein-rich foods such as lentils, edamame, and tofu. Portions and protein choices can be adjusted to fit individual goals, preferences, and medical needs; for example, fish could replace tofu in a pescetarian pattern.

This plant-based meal provides approximately **23 to 27 grams of dietary fiber**:

- **Cooked lentils (~1 cup):** ~15.6 grams
- **Edamame (~1/4 cup mixed in):** ~2.0 grams
- **Tofu (~1/2 cup cubes):** ~3.0 grams
- **Broccoli (~1/2 cup cooked):** ~2.5 grams
- **Other vegetables (kale, peppers, tomatoes, cucumber):** ~2.0 to 3.0 grams *combined*