

PROTEIN AND DIALYSIS

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Eating a high protein diet is very important in general, but even more so for people on dialysis. Protein plays a major role in growth and repair of body tissues, wound healing, fighting infections, muscle growth and fluid management.

Protein also plays an important role in dialysis treatments. Albumin is a protein found in the liver and is used to measure protein levels in the blood. People with low albumin generally also have muscle loss, weight loss, hair loss, fatigue, higher chance of infections, body swelling (edema), longer hospital stays and increased risk of heart disease.

Dialysis patients lose amino acids (building blocks for protein) with hemodialysis and protein with peritoneal dialysis. Patients on peritoneal dialysis need a bit more protein to maintain adequate protein levels. Up to 7 grams of protein is lost each day during peritoneal dialysis.

7 GRAMS OF PROTEIN IS EQUIVALENT TO

- 1 large egg
- 1 oz of meat
- 1/2 protein bar
- 1/4 cup of cottage cheese
- 3 pieces of medium size shrimp
- 1/2 cup of chickpeas

Patients undergoing hemodialysis should eat 1.2 g/kg of protein every day, while peritoneal dialysis patients should aim for 1.3g/kg (grams of protein per kg of body weight). A 150 lbs (68kg) person on peritoneal dialysis then needs approximately 89 grams of protein each day. Most patients need between 80-100 grams (10-12 oz) of protein each day. Best sources of protein include eggs, chicken, beef, turkey, pork, tuna, fish, beans and some dairy products such as cottage cheese and Greek yogurt. Always check with your renal dietitian before introducing beans and dairy products into your diet due to their high phosphorus and potassium contents.



HOW TO GET AT LEAST 80 GRAMS OF PROTEIN

Breakfast

- 2 eggs
- 1/2 cup milk
- 1/2 cup of berries

Lunch

- Tuna sandwich (1/2 cup of tuna)
- Or roast beef sandwich

Snack

- Small protein bar or 1/2 cup cottage cheese
- Or 1 small Greek yogurt

Dinner

- 3 oz of chicken
- 1/2 cup of green beans
- 1 small roll

Many people on dialysis need to add a protein supplement to their diet to increase protein intake. This can include ready to drink protein shakes, protein bars, protein powders and protein shots. Always check with your renal dietitian before starting a protein supplement.

Make sure you are getting adequate protein from your diet. Remember to always eat your protein first (before starch and veggies) since it's the most important part of your meal. Work with your dietitian on ways to increase your protein intake. To lead a long and healthy life, you need to eat a high protein diet.



High Protein Recipes

Garlic Chicken

Yield: **Serves 6 (Serving size 3 ounces)**

Ingredients

- 1 pound chicken breasts, boneless, skinless cut into 1/2-inch chunks
- 1/2 c. green peppers, diced
- 1/2 c. green onions (scallions), chopped
- 1/4 c. olive oil
- 8 cloves garlic, chopped
- ground black pepper to taste
- Mrs. Dash® (optional) – be careful with this if you are potassium-restricted

Directions

1. In large bowl, combine chicken, green peppers, and scallions.
2. Add olive oil, garlic, pepper, and Mrs. Dash, if using. Mix with wooden spoon, cover, and refrigerate overnight.
3. The following day, when ready to cook, sauté chicken mixture in large skillet or wok. Cook on low heat until chicken is cooked through.

Note: May be served over rice if desired.

Each Serving Contains:

- Calories: 177
- Protein: 17 g
- Carbohydrate: 3 g
- Total Fat: 11 g
- Potassium: 340 mg
- Phosphorus: 170 mg
- Sodium: 90 mg

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Petite Meatballs

Yield: **28 meatballs; 7 meatballs = 1 serving**

Ingredients

- 1 lb. extra lean ground beef
- ½ cup soft bread crumbs
- 1/3 cup 1% milk (5 tablespoons)
- ½ teaspoon onion powder
- ¼ teaspoon garlic powder
- 1/8 teaspoon pepper
- 1 tablespoon olive oil or canola oil



Directions

1. Combine ground beef, bread crumbs, milk and seasonings; mix lightly.
2. Shape mixture to form 1-inch balls.
3. Brown meat balls in oil.
4. Cook 2 minutes, stirring frequently.
5. Serve with hot horseradish sauce or mustard sauce.

Per Serving contains:

- Calories: 318
- Protein: 21 g
- Phosphorus: 182 mg
- Potassium: 336 mg
- Carbohydrate: 4 g
- Total Fat: 23 g

Contributed by:

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Recipes for Protein Shakes/Drinks

Cream of Wheat with Protein

- 1 Packet Instant Cream of Wheat
- 2/3 cup water
- 1 scoop of vanilla protein powder

Vanilla Smoothie

- 1 cup water
- 1 scoop or packet Vanilla protein powder
- 1/4 cup Frozen Fruit (Examples: 3 small Strawberries, 3 peach slices, ¼ cup blueberries, or ¼ cup raspberries)

Note: If you use fresh fruit, add ¼ cup ice.

Protein Coffee

- 8 oz cup of coffee (allow it to cool)
- 1 scoop of vanilla or plain protein powder

Protein lemonade

- 1 scoop of berry protein powder
- 8-16 oz of sugar free lemonade

Root beer Float

- 1 cup of flat A & W root beer
- 1 scoop of vanilla protein powder

Almond milk protein shake

- 8 oz of almond milk
- 1 scoop of vanilla protein powder

Applesauce with Protein

- 1 container of sugar free applesauce
- 1 scoop of unflavored protein powder