

Dietary Instructions for Hemodialysis Patients



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Our body organs do several functions and each organ has its specific function. Kidney is one of the vital body organs; its main function is to filter the blood and excrete waste products (urea, fluids and electrolytes) through urine.

In case of end stage renal failure kidneys become unable to do their functions properly leading to the accumulation of toxic products in the body.

Hemodialysis is one of the ways which can be used to overcome this defect.

Hemodialysis:

It is the process of removing excess waste from the blood by an artificial kidney.

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The following are the main nutritional concerns for patients on hemodialysis:

1. Protein.

One of the major nutrients your body needs for:

- Growth and muscle building.
- Repairing of tissues.



Sources of protein:

- **Animal:** good quality proteins like meat, poultry, fish, egg, and dairy products
- **Plant:** low quality proteins like legumes, nuts, grains and vegetables

* More percentage from good quality proteins (animal) is recommended.

Digestion of proteins results in the accumulation of harmful waste products (urea) that alter body functions.

Complying with the weekly dialysis schedule and consuming the required amount of proteins is the best way to keep the blood level of harmful waste down and maintain a healthy body.

The body loses about 10 grams of protein with each dialysis session through the artificial kidney and this must be compensated by food in order to prevent muscle wastage and malnutrition

Your recommended daily allowance of meat group is 5-6 exchange (150-180 grams)/day, and one exchange of protein is equal to:

- 30 grams (2 hand finger size) of boneless cooked chicken, meat, or fish.
- One egg.
- Two egg white.
- Two table spoons (40 grams) cottage cheese.
- 1 ½ table spoons (30 grams) low fat Cream cheese.
- Two table spoons (40 grams) Labnah.

Fluid:

Fluid is any thing liquid at room temperature such as:

- Water
- Ice
- Tea
- Coffee
- Juice
- Soup
- Ice cream
- Milk
- Laban
- yogurt
- sauces

Excess fluid intake accumulates in the body and will:

- Increase blood pressure
- Make your heart work harder
- Shortness of breath

The allowed inter dialysis weight gain is 3-5%of body weight or (2-3 Kg) between each two sessions, so consume the allowed quantity of fluids/day.

How to beat thirsty

- Try to stay in shady area
- Reduce intake of salt and salty food
- Try sucking an ice cube
- Take sips of water in stead of whole glass

How to calculate your daily fluid requirement?

Daily fluid Requirements =24 hours urine out put + (750ml-1000ml) fluids.

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Potassium (3.6-5.1 mmol/L):

One of the essential body minerals found naturally in foods

High or low potassium level can affect:

- Your Muscle functions specially heart.
- Your blood pressure
- Your body fluid balance

Use the following when you are on potassium restriction:

A-Fruits:

- Apple (one medium red or green)
- Grapes (10-12 pieces red or green)
- Pineapple (2-3 slices total of 100-150 grams)
- Strawberry (4-5 pieces)
- Pears (one small)
- Canned fruit (1/2 cup or 100 grams of the allowed fruits)
- ½ cup (125 ml) fresh juice of the allowed fruits
- You can take 2 fruits a day from the allowed mentioned above fruits
- You can exchange 3-4 pieces of dates with one of the above fruits
- Avoid fruit high in potassium content: orange, banana, mango, kiwi, apricot, & dried fruit.





B-Vegetables:

- Marrow
- eggplant
- carrots
- cauliflower
- cabbage
- broccoli
- Green beans
- capsicum
- canned mushroom
- green pumpkin
- Sweet yellow corn canned or frozen
- peeled cucumber
- lettuce

Avoid the use of tomato, tomato paste, tomato ketchup, soy sauce, Worchester sauce or any other sauces, spinach and other dark green leafy vegetables, potato, and chili peppers in cooking due to its high potassium content.

Onion, garlic herbs and spices can be used in moderation for cooking as appetizers

To reduce the potassium content of food you can boil the vegetables half boiling, discard the boiling water wash and re cook for doneness. You get better results by cutting the vegetables small pieces

Limit your daily consumption of milk and milk products to(120-180ml/day)

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Phosphorus (0.87-1.45 mmol/L):

One of the essential body minerals your body needs for building and maintaining healthy bones and teeth

High blood phosphorus level will:

- Affect your bones and teeth.
- May precipitate in body tissues causing damage and organs malfunction.

Comply with the phosphate binding medication along with the meals and avoid the following in case of high phosphorus level:

- Cheddar and white cheese full and low fat type.
- Liver
- Canned sardines
- Chocolates
- Ice cream
- Nuts
- Legumes
- Custard and milk puddings
- Soft drinks (cola)

Limit your daily consumption of milk and milk products to (120-180ml/day)

Limit your fish intake to two times / week and not to take more than 90 grams (1/2- 2/3 hand size) /time

Comply with the recommended daily intake of protein and don't over consume meat, poultries and other protein sources.

Sodium (135-145 mmol/L):

One of the essential body minerals. Table salt is the main source of sodium.

High sodium consumption result in:

- Making you feel thirsty
- Fluid retention.
- Elevated blood pressure.
- Make your heart work harder

You must keep a consistent moderate level of sodium consumption, so avoid the following:

- Pickles and salty cheese.
- Processed and canned meat
- Canned food; you can use some canned food like mushroom and sweet yellow corn. But make sure to drain the water and to wash well before use due to its sodium content. You may also use canned fruit from the allowed items.
- Be satisfied with a small amount of salt in cooking and don't add any while eating. You can use 3 gm (1/2 tea spoon) of salt/day in cooking
- Don't use soy sauce, Worcester sauce and others because it is rich in sodium.
- Don't use salt substitutes because it is rich in potassium.
- Make it a habit to eat food with less salt.

Nutrient	Value
Calcium	Less than 10%
Total Fat	Less than 30%
Sat Fat	Less than 10%
Cholesterol	Less than 30%
Sodium	Less than 20%
Total Carbohydrate	Less than 25%
Dietary Fiber	Less than 5%
Calories per gram:	*
Carbohydrate	4

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* Calories:

Food is the only source of energy (calories), imbalanced calorie intake leads to weight loss or obesity

Take the recommended amount of calorie as described by dietitian..

For Diabetic, Cardiac, Hyperlipidemic, and other nutritionally related conditions to contact dietitian for further dietary management.



Daily Sample Menu

1. Breakfast

Tea with milk (tea 100–120 ml, milk 50 ml)

Salad: (cucumber, carrot, lettuce)

Starch group:

Choose one item only:

- 2 slices bread
- 1 small Arabic loaf
- 1 cup corn flakes
- 2 small chapatti

Protein group:

Choose two item only:

- 2 boiled egg white or 2 egg white omelet
- low fat cottage cheese 40g (2 table spoon)
- low fat labna 40g (2 table spoon)
- low fat cream cheese 30g (1½ table spoon)
- 1 boiled egg (not more than 3 times per week)

2. Morning snack

Tea+50ml milk (tea:100–120 ml)

+

Choose one item only:

- 1 apple
- grapes (12–15 pieces)
- 1 small pear
- 2–3 slice pineapple: 100–150g
- strawberry (4–5 pieces)
- 2 pieces plain biscuit
- 1 piece chabora (rusks)
- 1 piece plain cake 50g (4 fingers)

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3. Lunch

- Salad (cucumber, carrot, lettuce, capsicum)
- Cooked vegetable saloona 100g (½ cup) from:
(Marrow, eggplant, cabbage, carrot, cauliflower, broccoli, green beans, capsicum, canned mushroom, canned or frozen corn, or green pumpkin).

Starch group:

Choose one item only:

- 150 gm rice (1 cup)
- 150 gm macaroni (1 cup)
- 150 gm Burghul (1 cup)
- 150 gm Harees or Thareed (1 cup)
- 3 slices bread

Protein group:

Choose one item only:

- chicken 90 g (breast or leg)
- meat 90g (2-3 times from egg size)
- grilled fish 90 g (½ - 2/3 hand size)

Note:

You can use 1 table spoon (15 gm) of vegetable oil in cooking



4. Afternoon snack:

Tea (100-120 ml) + 50ml milk

+

Choose one item only:

- 1 apple
- grapes (12-15 pieces)
- 1 small pear, Or
- 2-3 slice pineapple (100-150 gms)
- strawberry (4-5 pieces)
- 2 pieces plain biscuit
- 1 piece chabora (rusks)
- 1 piece plain cake 50 gms (4 fingers)

5. Dinner:

- Salad (cucumber, carrot, lettuce, capsicum)
- Cooked vegetable saloona 100g (½ cup) from (marrow, eggplant, cabbage, carrot, cauliflower, broccoli, green beans, capsicum, canned mushroom, canned or frozen corn, green pumpkin)

Starch group:

Choose one item only:

- 2 slices bread
- 1 small Arabic loaf
- 1 cup corn flakes
- 2 small chapatti
- 100 g rice (⅔ Cup)
- 100 g macaroni (⅔Cup)
- 100 g burgle (⅔ Cup)
- 100g harees or thareed (⅔ cup)



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Protein group:

Choose one item only:

- 2 boiled egg white or 2 egg white omelet
- low fat cottage cheese 40 g (2 table spoon)
- low fat labna 40 g (2 table spoon)
- low fat cream cheese 30 g (1 ½ table spoon)
- 1 boiled egg (not more than 3 times per week)
- chicken 60g (breast or leg)
- meat 60g (2 times from egg size)
- grill fish 60g (½hand size)

Note:

You can use 1 table spoon (15 gm) of vegetable oil in cooking

6. bed time snack:


½ cup (125g) rice or corn or semolina porridge only with 50 ml milk.





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