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## CALCIUM RESTRICTED DIET (20 mEq - 400 mg)

### Purpose:

The calcium restricted diet is prescribed for patients with hypercalcemia or hypercalciuria. These conditions may be caused by hypervitaminosis D causing an increase in calcium absorption from the intestine and calcium leaching from bone; hyperparathyroidism that is not operable; idiopathic hypercalciuria caused by primary intestinal overabsorption of calcium. In sarcoidosis, hypercalcemia and hypercalciuria may be cycles with increases in the summer months by elevated circulating levels of vitamin D causing an increased calcium absorption from the intestines. Some individuals are more sensitive to high levels of calcium in the diet and antacid compounds containing calcium. Use of large amounts of non calcium containing antacids, such as Maalox and Amphogel, that bind phosphate in the gut increases the absorption of calcium.

As a precaution against hypercalciuria and urolithiasis in patients immobilized by spinal cord injury, calcium intake is restricted. The level of restriction will be determined by each patient's condition. For those patients the intake of calcium is generally restricted to 600 mg to 800 mg per day.

Prolonged hypercalcemia may result in permanent renal, heart, and aortic damage. Drug therapy may be necessary along with dietary restriction of calcium.

### Diet Principles:

1. The calcium level of the diet is maintained around 400 mg per day.
2. Foods high in calcium are restricted.
3. Water used for cooking and drinking may need to be distilled if the local water supply is high in calcium.
4. For patients with hypercalciuria fluid intake is increased. A urinary volume of approximately 2500 ml in 24 hours is important along with the low calcium diet in controlling calcium stone formation.

### Adequacy:

The calcium restricted diet meets the Recommended Daily Dietary Allowance except for calcium, riboflavin, and vitamin D. The diet as listed in the meal plan contains the approximate nutritive values:

Calories	2400
Protein	80 gm
Fat	90 gm
Carbohydrate	310 gm
Calcium	400 mg

CALCIUM RESTRICTED DIET (continued)

SUGGESTED MEAL PLAN

	Serving
<b>Breakfast:</b>	
Fruit or juice	1/2 C.
Cereal	1/2 C. to 3/4 C.
Breakfast entree (egg)	1
Bread/rolls, special	2
Margarine	2 tsp.
Jelly	1 Tbsp.
Milk, 2%	1/2 C.
Coffee or Tea	1
Cream	1 oz.
Sugar	1 Tbsp.
Salt	1 packet
<b>Lunch:</b>	
Broth soup/juice/salad	1/2 C. to 1 C.
Lunch entree (meat)	3 oz.
Starch	1/2 C.
Dessert/fruit/gelatin	1
Bread/rolls/crackers, special	2
Margarine	2 tsp.
Jelly	1 Tbsp.
Coffee or Tea	1
Sugar	2 tsp.
Salt	1 packet
<b>Dinner:</b>	
Broth soup/juice/salad	1/2 C. to 1 C.
Dinner entree (meat)	3 oz.
Starch	1/2 C.
Vegetable	1/2 C.
Dessert/fruit/gelatin	1
Bread/rolls/crackers, special	2
Margarine	2 tsp.
Jelly	1 Tbsp.
Coffee or Tea	1
Sugar	2 tsp.
Salt	1 packet

CALCIUM RESTRICTED DIET (concluded)

Food	Allowed	Not Allowed
Potatoes and Substitutes:	White potato, macaroni, noodles, spaghetti, refined rice, brown rice.	Sweet potatoes, potatoes prepared with milk.
Soups:	Broth, bouillon, broth type soups.	Soups made with cream, milk, or cheese.
Sweets:	Sugar, corn syrups, honey, fondant, hard candies, jelly beans, gum drops, jam, jelly.	Brown sugar, molasses, caramels, maple syrup. Candies containing milk, cream, or chocolate.
Vegetables:	2-3 servings daily: All fresh, frozen, and canned vegetables and vegetable juices except those not allowed.	Artichokes, acorn and butternut squash, dried vegetables, scallions, green leafy vegetables such as broccoli, chard, all greens, okra, kale, spinach, sauerkraut, cabbage, soy beans, rutabaga.
Miscellaneous:	Salt, pepper, spices, herbs, vinegar, catsup, mustard, horseradish, popcorn.	Cream sauces, cheese dips, Brewers yeast, nuts, peanut butter.