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## High Calcium for Bone Health

The purpose of this diet is to assure an adequate and effective intake of calcium in adults. It is intended to promote optimal calcium accretion prior to age 35 and prevent age-related bone loss. The diet is indicated for those at risk of osteoporosis. The high risk groups include the elderly, especially women, people of Anglo or Asian descent, women with early menopause (surgical or natural), and persons with malabsorption syndromes, chronic renal insufficiency or failure and alcoholism. The elderly may not meet calcium requirements due to inadequate energy intake, altered intestinal calcium absorption, estrogen deficiency or a due to a high prevalence of lactose intolerance in this population. For those individuals who cannot consume adequate dietary calcium, calcium supplements may be recommended. However, excessive calcium supplements could be hazardous when calcium is absorbed in excess of the ability to excrete it. Calcium may become deposited in tendon sheaths, bursae and skeletal muscles. Other possible adverse effects of excessive calcium consumption include kidney stones, milk alkali syndrome and renal insufficiency.

### Reference Intake for Calcium

Age Group	Age	Calcium Goal
<b>Infants</b>	0-6 months	210 mg/day
	7-12 months	270 mg/day
<b>Children</b>	1-3 years	500 mg/day
	4-8 years	800 mg/day
<b>Males</b>	9-18 years	1300 mg/day
	19-50 years	1000 mg/day
	51+ years	1200 mg/day
<b>Females</b>	9-18 years	1300 mg/day
	19-50 years	1000 mg/day
<b>Pregnant or Lactating</b>	<18 years	1300 mg/day
	19-50 years	1000 mg/day

### General Guidelines for a High Calcium Diet

- When calcium requirements cannot be met by diet, it may be necessary to include calcium fortified foods or a calcium supplement.
- Choose at least 2-3 servings of low fat dairy foods such as milk, cheese or yogurt to increase your calcium content in the diet instead of relying on supplements.
- Increase the calcium content in your diet by using milk in the preparation of hot cereals, cream soups and other recipes that call to water and by sprinkling shredded low fat cheese on casseroles and baked potatoes.
- If you have lactose intolerance, choose foods with a lower lactose content (for example, yogurt, pudding or custards and aged cheese). It may also help to drink lactose free milk or small amounts of milk and increase amounts gradually if there are no adverse problems.
- Include foods such as clams, oysters, canned sardines and salmon (with soft bones) in your diet.
- Avoid foods high in oxalic acid such as spinach, rhubarb, chard, beet greens and sweet potatoes.
- Limit caffeine in your diet as this can increase the amount of calcium lost.
- Include dark, leafy green vegetables such as kale, collard, turnip greens, mustard greens and broccoli. These are high in calcium and low in oxalic acid.
- Limit your sodium intake as a high sodium diet can increase the amount of calcium excreted.

## Calcium Content of Selected Foods

Food	Amount	Calcium (mg)
Buttermilk	1 cup	285
Chocolate Milk	1 cup	284
Evaporated Skim Milk	1 cup	368
Whole Milk	1 cup	291
1% Low Fat Milk	1 cup	300
2% Low Fat Milk	1 cup	297
Skim Milk	1 cup	302
Dry Nonfat Milk	2 tbsp	104
American Cheese	1 oz	174
Blue Cheese	1 oz	150
Brick Cheese	1 oz	191
Cheddar Cheese	1 oz	204
American Cheese	1 oz	174
Swiss Cheese	1 oz	205
Colby Cheese	1 oz	194
2% Low Fat Cottage Cheese	1/2 cup	155
Edam Cheese	1 oz	207
Monterrey Cheese	1 oz	212
Mozzarella Cheese	1 oz	207
Muenster Cheese	1 oz	203
Part Skim Ricotta	1/2 cup	334
Chocolate Milkshake	10 oz	374
Vanilla Milkshake	10 oz	415
Ice Cream	1 cup	176
Hardened Ice Cream	1/2 cup	88
Soft Serve Ice Cream	1 cup	274
Flavored Yogurt	1 cup	389
Low Fat Fruit Yogurt	1 cup	345
Plain Yogurt	1 cup	240
Chocolate Pudding	1/2 cup	133
Baked Custard	1/2 cup	148
Oysters	7-9	113
Salmon with Bones	3 1/2 oz	185
Sardines with Bones	3 oz	382
Canned Shrimp	3 oz	99
Regular Tofu	4 oz	130
Cheese Pizza	1/4 of 14" pie	332
Chili Con Carne	1 cup	82
Beans	1 cup	181
Mushroom Soup made with Milk	1 cup	191
Tomato Soup made with Milk	1 cup	168
Bokchoy (cooked)	1 cup	252
Fresh Broccoli (cooked)	1 cup	72
Collards (cooked)	1 cup	220
Fresh Kale (cooked)	1 cup	94
Fresh Mustard Greens (cooked)	1 cup	104
Fresh Turnip Greens (cooked)	1 cup	267
Frozen Spinach (cooked)	1 cup	276
Lima Beans (cooked)	1 cup	55
Navy Beans (cooked)	1 cup	95
Black-eyed Peas (cooked)	1 cup	43
Great Northern Beans (cooked)	1 cup	90
Kidney Beans (cooked)	1 cup	74
Almonds	1/2 cup	184
Filberts	1/2 cup	146
Sesame Seeds	1/2 cup	83
Sunflower Seeds	1/2 cup	87
Blackstrap Molasses	1 tbsp	137

**Sample Menu Plan >1000 mg/day of Calcium**

<b>Suggested Meal Plan</b>	<b>Sample Menu</b>	<b>Your Menu</b>
<b>Breakfast</b> Fruit or Juice Cereal Bread Margarine/Jelly Milk Beverage	1/2 cup Orange Juice 1 cup Wheat Flakes 2 slices of Toast 2 tsp Margarine/Grape Jelly 1 cup Low Fat Milk 1 cup Decaffeinated Coffee	
<b>Noon Meal</b> Soup or Juice Meat/High Protein Food Bread Vegetables Fruit/Dessert Milk Beverage	1 cup Vegetable Soup 2 oz Sliced Chicken 2 slices Bread Lettuce/Tomato & 1/2 cup Carrot Sticks 1/2 cup Pudding 1 cup Low Fat Milk 1 cup Decaffeinated Iced Tea	
<b>Evening Meal</b> Meat/High Protein Food Starch Vegetables  Bread Fruit/Dessert Milk Beverage	2 oz Broiled Fish 1 cup Buttered Rice 1 cup Green Peas 1 cup Tossed Salad with 1 tbsp French Dressing 2 Biscuits with 2 tsp Margarine 1/2 cup Sliced Peaches 1 cup Low Fat Milk 1 cup Decaffeinated Iced Tea	

**For more Information visit:**

[www.nof.org/](http://www.nof.org/)

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