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A GUIDE TO DIETARY AND SUPPLEMENTAL CALCIUM

Osteoporosis, a condition characterized by the loss of bone mass, can lead to weak bones and increased risk of fractures. More than 25 million Americans are affected with osteoporosis. Osteoporosis is responsible for 1.5 million fractures annually. A woman's lifetime risk of dying from complications after a hip fracture is about the same as her lifetime risk of dying from breast cancer - about one in eight. In order to prevent osteoporosis, it is important that you build and protect your bone mass through a program of regular exercise and proper nutrition with adequate amounts of calcium and vitamin D in your diet. Dairy products are considered to be the most important sources of calcium. However, several categories of food contain high levels of calcium. Using the following list as well as reading labels carefully will enable you to improve the calcium content in your diet. (*See DIETARY SOURCES OF CALCIUM on back of this sheet

TIPS TO INCREASE THE CALCIUM CONTENT OF YOUR DIET:

- * Add cheese chunks, shredded cheese, or grated cheese to salads, vegetables, soups, and sandwiches.
 - * Use milk (preferably non-fat milk) in cooking when possible. Note: sources with lower fat content provide the same amount of calcium while sparing you unnecessary fat and calories (i.e., skim milk is just as good as whole milk).
 - * Add powdered non-fat dry milk to hot beverages, soups and recipes for cakes, breads, and cookies to enhance calcium content without adding many calories.
 - * Prepare soup stock with the bones of meat and add several teaspoons of vinegar to draw the calcium out of the bones.
 - * Try tofu (soybean curd) with vegetables, fish, or meat.
- Medication: Thyroid pills, Fosamax, Actonel, Boniva, thyroid supplements, Iron, Tetracycline, or Ciprofloxacin: It is recommended to take these medications 2 hours before or at least 4 hours after taking calcium in order to better absorb calcium.

FOR THOSE WHO ARE LACTOSE INTOLERANT:

- * Acidophilus milk (or lactose-reduced milk) provides a good alternative to skim or low-fat milk while delivering a comparable amount of calcium. The process of making yogurt and cheese breaks the lactose molecule, thereby enabling many lactose-intolerant individuals to eat these dairy products.
- * Over-the-counter products, such as Dairy-Ease and Lactaid replace the lactose enzyme which lactose-intolerant individuals lack enabling them to consume milk and milk-containing foods.

CALCIUM SUPPLEMENTS

The average American consumes less than 800 mg. of calcium per day. While experts strongly recommend a calcium-rich diet as the preferred source of this mineral, calcium supplements are available. To enhance absorption, calcium supplements are best absorbed when taken with food and in divided doses. If you are taking 1200 mg a day, take 600 mg with breakfast and 600 mg with dinner. High fiber cereals or fiber supplements can impede calcium absorption. Many people chew Roloids or TUMS are their source of calcium but they do not have any vitamin D in them so you need to supplement that to help with absorption.

VITAMIN D

Vitamin D can be found as a supplement in milk as well as in a majority of calcium supplements. Vitamin D supplementation may be especially important for elderly patients in whom both skin synthesis and absorption of vitamin D may be impaired. The main function of vitamin D is to assist the intestine in the absorption of calcium. Without vitamin D, even though a person is consuming calcium, the calcium may not enter the circulation. The recommended daily dose is 40 IUs but will likely increase to 800 IUs. The best source of vitamin D is the sun. Exposure to sunlight provides most humans with their vitamin D requirement. Sunscreen will block vitamin D synthesis but you only need about 10-15 minutes of sunlight, then put on your sunscreen. There are a few natural food sources of vitamin D: cod liver oil, tuna fish and salmon.

DIETARY SOURCES OF CALCIUM

<u>FOOD</u>	<u>SERVING SIZE</u>	<u>CALCIUM</u>	<u>CALORIES</u>	<u>FAT(gms)</u>
<u>DAIRY:</u>				
Cheddar cheese	1 oz.	204	115	9
Mozzarella cheese	1 oz.	207	80	5
Cottage cheese (2%)	1 cup	155	200	4
Milk, whole	1 cup	291	150	8
Milk, (2%)	1 cup	297	120	5
Milk, skim	1 cup	302	80	0
Yogurt, plain, low fat	1 cup	415	145	4
Cheese pizza (1/8 of a 15 inch pie)	1 slice	220	290	9
Macaroni & Cheese	1 cup	200	230	10
Ice cream, vanilla	1 cup	176	255	14
Ice milk, vanilla	1 cup	176	200	7
Frozen yogurt, vanilla	1 cup	160	220	3
Sherbet	1 cup	240	60	3
<u>FISH:</u>				
Salmon, pink, w/bones	3 oz.	167	120	4.6
Sardines, oil, w/bones	3 oz.	370	175	9
Shrimp, canned	3 oz.	98	100	1
<u>FRUITS & VEGETABLES:</u>				
Orange juice w/calcium	8 oz.	300	110	0
Strawberries	16 berries	64	200	0
Broccoli, raw, cooked	1 spear	72	40	0
Collards	1 cup	357	30	0
Kale, cooked	1 cup	179	42	0
Peas	1 cup	32	140	0
<u>OTHER:</u>				
Almonds	1/4 cup	75	210	17
Hot cocoa	6 oz.	90	100	1
Tofu, Raw, firm	2 cup	250	200	10
Tomato soup	1 cup	160	160	6
Pork and beans	1 cup	140	310	7
Calcium fortified cereal	3/4 cup	250	(varies)	

CALCIUM INTAKE RECOMMENDATIONS:

Adolescents/young adults (11-24 years).....	1200 - 1500	mg/day
Women (25-50 years).....	1000	mg/day
Postmenopausal women, < 65 yrs. on estrogen..	1000	mg/day
Postmenopausal women, < 65 yrs. not on ERT...	1500	mg/day
All women over 65 years of age.....	1500	mg/day
Pregnant or lactating women: Add 400 mg. to base recommendation.		

<u>Elemental CALCIUM</u>		<u>CALCIUM SUPPLEMENT</u>	
A. Calcium Carbonate		<u>VIT. D (Per Tab)</u>	
Generic & Vits D 600 mg.		Cal.	200 Iu. D
Caltrate Plus	600	400 I.U.	
Oscal 500 + D	500	200 I.U.	
Rolaids	220		
Tums Ex	300		
Tums Ultra	400		
Viactiv	500	100 I.U.	
B. Calcium Citrate			