

# HEALTHFUL TIPS

## Keep Your Bones Strong

**W**e tend to think of our bones like rocks, stable and unchanging, but our bones are continually being broken down and rebuilt just like our skin or muscle tissue. Before weight loss surgery, bones have become strong and dense to support excess weight. After surgery, bones tend to lose strength and density, because they are not supporting as much weight, nutrient intake decreases, and absorption may be hindered due to less stomach acid (bypass and sleeve) and less intestinal absorptive area (bypass).

Keeping your bones strong and healthy requires adequate intake of calcium and vitamin D. These nutrients should be obtained from the foods and beverages that you choose each day, from supplements, or from a combination of the two. Add up your calcium and vitamin D intake below to insure that you are getting the recommended amounts needed to keep your bones strong.

### Supplement Tips

- Calcium carbonate supplements are best absorbed when taken with meals--no more than 500 mg of calcium at one time.
- Calcium carbonate and calcium citrate are both good sources of calcium. Calcium carbonate has two times the calcium (by weight) than calcium citrate, so fewer or smaller tablets are required. Calcium citrate is better absorbed (20% greater absorption than calcium carbonate) when low stomach acid is present. Either form of calcium supplement will help you meet your body's requirement.
- Regular weight bearing exercise, such as walking or strength training, helps to keep your bones strong.
- Adequate Vitamin D allows the body to absorb and utilize calcium. Vitamin D is activated by exposure to sunlight and is found in fortified foods and dairy products.



- When calcium is taken in a chewable or liquid form, it may be absorbed more easily.
- Excessive alcohol consumption and smoking decrease bone density.
- Calcium can interfere with the absorption of iron. Take iron supplements separately, between meals if tolerated.

### Calcium Content of Selected Foods/Beverages

Food	Calcium (mg)	Vitamin D (IU)
Yogurt (8 oz)	315-400	80
Milk (8 oz)	300	115
Milk, soy fortified (8 oz)	300	120
Cheese, Swiss (1 oz)	270	6
Calcium Vitamin D fortified orange juice	350	100
Cheese, cheddar (1 oz)	205	not listed
Cheese, mozzarella part-skim (1 oz)	85	not listed
Cottage cheese (1/2 cup)	75	not listed
Cheese, parmesan (1 Tbsp)	70	not listed

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## Calcium Content of Selected Supplements

Supplement	Calcium	Vitamin D3	Form of Calcium	Approx Cost for 1200 mg
Flintstone Complete Chewable Vitamins (2)	400 mg	2400	Calcium Pantothenate	NA
Centrum Chewable (2)	216	800	Calcium Carbonate	NA
Centrum Silver (2)	440	1000	Calcium Carbonate	NA
Tums Extra Strength 750 (2)	600	0	Calcium Carbonate	\$0.24
Citracal Petites (2 caplets)	400 mg	500 IU	Calcium Citrate	\$0.42
Caltrate Soft Chews (1 chew)	600	800	Calcium Carbonate	\$0.33
Caltrate Calcium & Vitamin D3 Plus Minerals Chewable	600	800	Calcium Carbonate	\$0.22
Caltrate 600 (1)	600	800	Calcium Carbonate	\$0.21
Now Calcium Citrate Powder 1 ½ teaspoons	630	0	Calcium Citrate	\$0.29
Celebrate Calcium Citrate Soft Chews	250	250	Calcium Citrate	\$0.98
Celebrate Calcium Chewable (4 tablets)	1000	1000	Calcium Citrate	\$0.66
Bariatric Advantage Calcium Citrate Chewables	500	300	Calcium Citrate	\$0.43
Bariatric Advantage Calcium Citrate Chew Bites	500	500	Calcium Citrate	\$0.84

	Example		Gastric Bypass		Gastric Sleeve		Adjustable Band	
	Calcium	Vit D	Calcium	Vit D	Calcium	Vit D	Calcium	Vit D
Multi Vitamin	400	2400						
Food/beverage Sources	300	115						
Calcium Supplement	1260	0						
Vitamin D3 Supplement								
Totals	1960	2515						
<b>Upper Recommendations</b>			<b>2000 mg</b>	<b>2000 IU</b>	<b>1500 mg</b>	<b>2000 IU</b>	<b>1500 mg</b>	<b>2000 IU</b>