

Super Baby Food Book
Sample from Nutrition Chapter:

Information on Vitamin C

Vitamin C

Perhaps you've heard the story of the British sailors in the eighteenth century, who came down with scurvy approximately three months into a long ocean trip. Their diet consisted of meat and cereals, and no fresh vegetables and fruits. This complete lack of vitamin C caused scurvy, which is a disease characterized by bleeding under the skin, bleeding and swollen gums, swollen legs and arms, bleeding in eyes, very dry skin, shortness of breath, and hair loss. By the late eighteenth century, all British ships were regularly supplied with lime juice, and British sailors came to be known as "limey's." The sailors were subsequently "without scurvy." And to increase your language origins trivia knowledge, know that the Latin word for "without scurvy" is *ascorbic*.

The body cannot manufacture vitamin C. It must be obtained from foods and it must be obtained often. It is easily absorbed in the intestine and excesses are excreted in the urine. Vitamin C foods should be eaten with foods containing iron and calcium, because it increases their absorption in the intestines. Vitamin C also helps the body use folic acid and manganese.

Of course, breastmilk has enough vitamin C for your baby. If you are formula feeding, give your baby a vitamin C fruit juice or pureed fresh fruit with vitamin C.

The body can absorb only so much vitamin C at one time, therefore it is better to eat small amounts of vitamin C foods several times a day than to eat all of your vitamin C foods at one meal. The body excretes vitamin C in the urine, even if body tissues are not saturated.

Stability:

Vitamin C is very unstable, in fact, it is the most unstable of all vitamins. Exposure to heat, light, and air quickly destroys vitamin C. For example, approximately half of the vitamin C of an thin orange slice is gone after being exposed to air for only 30 minutes. Keep this in mind when looking at the Best Sources table for vitamin C. Squeeze fresh orange juice and have your baby drink it immediately. Keep foods cold, fresh, and in a dark environment to preserve vitamin C. Now you know why the light in the refrigerator goes out when you close the door. Don't let sliced foods sit on the counter at room temperature, cover them and return them to the refrigerator right away. Freezing preserves vitamin C in foods. Cooking by boiling destroys twice as much vitamin C than

steaming, and microwave cooking is slightly better than steaming. Using copper utensils in cooking also destroys vitamin C.

Functions in the human body:

Vitamin C is an antioxidant (see the nutrition chapter) necessary for healthy skin and red blood cells, wound and bone healing, and infection prevention. It helps form collagen, which forms connective tissue that binds tissue cells together. Collagen is found in bones, teeth, and tendons, and in the skin, the eyes, the blood vessels. Vitamin C promotes stress hormone production and requirements for this vitamin increase when the body is under stress. Vitamin C may increase resistance to colds and infection. Eating lots of fresh fruits and vegetables with vitamin C has been associated with a decreased incidence of some cancers, but there is no definite correlation yet (so what).

Deficiency symptoms:

Scurvy is rare in the United States, but marginal vitamin C deficiency is common due to alcohol, smoking, stress, lack of fresh fruits and vegetables in the diet, and some medications. (If you still smoke, know that cigarettes eat up lots of vitamin C. In fact, smoking a pack destroys the vitamin C in eight oranges.) Symptoms include bleeding and spongy gums, nosebleeds, pinpoint hemorrhages under the skin, dry skin, slow healing wounds and fractures, swollen and painful joints, loose or weakened teeth, muscle cramps, poor lactation, fatigue, irritability, weakness, restlessness, and loss of appetite. In infants and children, vitamin C deficiency also can cause stunted growth.

Toxicity symptoms:

None. Some adverse effects have been reported with excessive supplementation (1000+ mg daily) for long periods of time, such as kidney stone development, diarrhea or flatulence, skin rash, anemia, burning sensation during urination, and low blood sugar. Too much vitamin C might also destroy copper and selenium in the body.

My personal vitamin C story:

I have taken between 500 to 1000 mg per day for the last 20 years. There was a time when I stopped taking vitamin C for a few months. Ironically, it was during a very stressful period in my life, when my body needed more than my usual amount of vitamin C. My gums began to bleed every time I brushed my teeth. It took four dental visits to have my gums scraped. (This is definitely something you want to avoid.) I believe my gum problems were caused by the vitamin C supplementation stoppage. What's the moral of my story? If you consume large doses of vitamin C for a long time and then stop, you may develop deficiency symptoms, even if your diet is high in vitamin C compared to the RDA. If you want to reduce your intake, do so slowly over a period of time so your body can adjust. If you took supplements while pregnant, your infant may be used to a high vitamin C intake. Ask your doctor if you should give him supplements. Fortunately, my baby had no problem.

Vitamin C Content in the Super Baby Foods

The numbers in the table below are meant to give you a rough idea of the foods that supply significant amounts of vitamin C. None of these numbers should be considered extremely accurate, because nutrient content depends on several factors, including age of the food, cooking method, the soil it was grown in, the method and length of storage, maturity and ripeness at harvest, and others. Adding to the variability is the fact that every baby's nutrient requirements are different, depending on age, weight, activity level, climate, genetics, and other variables. However, I hope you find these bar charts helpful in planning a healthy diet for your baby.

I think you'll find the information on the instability of vitamin C interesting. It is best to give your baby vitamin C through fresh, raw fruit, because cooking destroys this nutrient. My baby loves kiwi fruit--we share one almost every day as a snack. I just cut a ripe kiwi in half, and spoon feed directly from the fruit--what could be easier! Also interesting is the fact that it is better to give your baby several smaller doses of vitamin C throughout the day, than one large dose. Read page 45 to find out why.

The next section contains information on vitamin C, which can be used to be sure that your baby is getting his daily requirement of this important nutrient. Compare the bar at the top of the Vitamin C table below next to your baby's age to the bars of the foods your baby eats. Note that food portions are baby-sized for your convenience. One ounce of broccoli or other vegetable is equal to approximately one food cube. Many fruit portions for babies are given in fractions: 1/8 cantaloupe, 1/4 orange, 1/2 kiwi fruit. When trying to figure the size of these portions, picture in your mind a medium-sized fruit.

Vitamin C (Ascorbic Acid) Table

Recommended Daily Allowance (in mg):

Birth to 6 months:	30 *****
6 to 12 months:	35 *****
1 to 3 years:	40 *****

Best Super Baby Food Sources (mg in each serving):

1/2 cup fresh orange juice	63 *****
1/2 cup canned papaya juice	51 *****
1/2 medium kiwi fruit	38 *****
1/8 cantaloupe	32 *****
1/4 cup fresh lemon juice	28 *****
1 oz. green peppers	25 *****

1/2 cup canned tomato juice	24 *****
1/2 cup green raw cabbage	24 *****
1/4 cup strawberries	22 *****
1/8 papaya	21 *****
1/4 cup fresh lime juice	20 *****
2 tablespoons raw parsley	17 *****
1/2 cup blackberries	15 *****
1 oz. Brussels sprouts	14 *****
1 oz. broccoli	14 *****
1/4 Florida avocado	13 *****
1 oz. turnip greens	13 *****
1/2 cup canned pineapple juice	12 *****
1/2 raw tomato	12 *****
1/2 cup raspberries	11 *****
1/4 orange	11 *****
1/2 cup raw pineapple	11 *****
1/2 cup blueberries	10 *****
1 small banana	10 *****
1/2 cup cherries	10 *****
1/2 cup mashed potatoes	10 *****
1/8 mango	9 *****
1 oz. collard greens	9 *****
1 oz. kale	9 *****
1 slice canned pineapple	7 ***
1/2 cup watermelon	7 ***
1/8 mango	7 ***
1 oz. cauliflower	7 ***
1 oz. spinach	7 ***
1/4 California avocado	6 ***
1/2 medium apple	6 ***

1 oz. lima beans	5 **
1 oz. mustard greens	5 **
1/4 cup canned pumpkin	5 **
1/2 nectarine	4 **
1/2 cup acorn/butternut squash	4 **

There is complete information in the Nutrition Chapter of the Super Baby Food Book similar to the Vitamin C information above for the following nutrients:

- Beta Carotene (Vitamin A)
- Vitamin D
- Vitamin E
- Vitamin K
- Thiamine (Vitamin B1)
- Riboflavin (Vitamin B2)
- Niacin
- Pantothenic Acid
- Vitamin B6
- Vitamin B12
- Biotin
- Folate (Folic Acid)
- Vitamin C (Ascorbic Acid)
- Calcium
- Phosphorus
- Magnesium
- Potassium
- Sodium
- Iron
- Copper
- Zinc
- Manganese
- Selenium
- Bioflavonoids
- Boron
- Chloride (Chlorine)
- Choline
- Chromium
- Cobalt
- Fluoride (Fluorine)
- Inositol
- Iodide (Iodine)

- Linoleic Acid
- Linolenic Acid
- Omega3
- Molybdenum
- Nickel
- Silicon
- Sulfur

The nutrition part of the *Super Baby Food* book also contains the section: **Toxic Substances Found in the Human Body and How to Avoid Them**: Aluminum, Cadmium, Lead, Mercury, and Radon.