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## **Food Sources for Lycopene**

Lycopenes are bioflavonoids that are closely related to beta carotene. In human blood serum, lycopene is the dominant carotenoid and constitutes approximately 50 percent of all carotenoids found in the serum. Lycopene appears in slightly higher concentrations in the prostate. As you grow older, the lycopene serum values are found to decrease as the risk of prostate cancer increases.

Lycopene is present in tomatoes and several other red fruits. Lycopenes give tomatoes its red color. Tomatoes are one of the best sources for lycopene.

Lycopene has been found to reduce the risk of prostate and lung cancer. The incidence of digestive cancers, such as those of the mouth, esophagus, stomach, colon, intestines, and rectum, may also be lowered with correct dosages of lycopene.

### **How Does Lycopene Work?**

Of all the common carotenoids found in the Western diet, lycopene has been shown in experiments to have the highest oxygen- quenching capacity (strongest antioxidant). It is twice as powerful as beta carotene at neutralizing free radicals. This antioxidant property protects the cells from DNA damage. In addition to this antioxidant activity, lycopene's biological activities include growth control and cell to cell communication.

Tomato sauce, tomatoes, and pizza were the primary contributors of lycopene. While lycopene is found in small amounts in a few fruits, tomato products are the richest sources.

### **Food Sources for Lycopene**

Red fruits and vegetables, such as:

- Tomatoes
- Watermelons
- Pink grapefruits
- Apricots
- Pink guavas

Processed tomato products, such as



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- Tomato juice
- Tomato ketchup
- Tomato paste
- Tomato sauce
- Tomato soup

**Bioavailability of Lycopene**

Lycopene from processed tomato products appears to be more bioavailable than that from raw Tomatoes. Bioavailability of lycopene is believed to be affected by:

- Processing (cooking) undergone
- Presence of dietary lipids
- Heat-applied
- The dosage and the presence of other carotenoids, such as  $\beta$ -carotene

The bioavailability of lycopene is significantly higher when lycopene was ingested along with  $\beta$ -carotene than when ingested alone.

<b>Dietary Sources for Lycopene</b>		
<b>Food</b>	<b>Measure</b>	<b>Lycopene (mg)</b>
Watermelon	1/2 cup	3.3
Guava	1	4.9
Pink Grapefruit	1	8.0
Tomato, raw	½ cup	8.3
Vegetable Juice Cocktail	1/2 cup	11.7
Tomato juice	1/2 cup	13.2
Tomato paste	2 tbsp	18.2



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Spaghetti/marinara sauce	½ cup	20.0
Tomato puree	1/2 cup	20.8
Tomato sauce	½ cup	21.9

### **The Arguments Against Lycopine**

Although there is question that fruits and vegetables high in lycopene had shown protective and curative effects against prostate cancer and other cancers, many scientists are not convinced that lycopene is the one which is doing the trick.

Some argue that it is the antioxidant properties of lycopene that is really beneficial combined with complex interaction with other micronutrients present in the food. There are other examples of herbs or foods that provides the beneficial effect. Then comes the scientists and propose an active ingredient responsible for this benefit. On further study, we find that the proposed active ingredient, given alone, cannot reproduce the healing results identified with the whole food or whole herb. I am a strong proponent of taking the whole food or herb as opposed to supplements.

Don't rely on lycopene supplements. Eat tomatoes and tomato-containing foods as part of a diet rich in fruits and vegetables. We know they work. Go for it.

### **Recommendations:**

Take 1 to 2 servings of lycopene-rich tomato or tomato products every day for maximum protection against cancers. Cooked tomato products (especially cooked in olive oil) is the most beneficial. Lycopene is not well absorbed unless it has been heated. Tomato sauce, tomato paste, and catsup are the best sources. Avoid foods that are high in sugar and salt.

Buy the reddest tomatoes you can find. They contain the most lycopenes.