



Nutrient Content of Lamb

As a meat from a mammal with higher myoglobin content, lamb is considered a red meat, along with beef and pork. Therefore, it is one of the few good sources of iron and an excellent source of zinc. On average, a 3-ounce cooked portion of lamb provides greater than 20 percent of the daily value of zinc, vitamin B-12, niacin, and protein in about 175 calories making lamb a nutrient-dense food. Lamb also can be an excellent source of selenium depending upon the selenium content of the soil from which the animals' feed is derived. It is also a good source of riboflavin. Providing many nutrients within limited calories is particularly beneficial among the growing numbers of obese Americans.

The similarity in the nutritional profiles of a variety of cuts of lamb has allowed the development of a composite set of nutritional values. Nutritional analyses of various lamb cuts produced in the United States, New Zealand, and Australia have been averaged to provide an average nutritional content shown in Table 1.

Table 1. Average Nutrient Data for All Lamb Cuts Available to U.S. Consumers From Australian, New Zealand, or American Sources.*

	Average Values for 3-Ounce or 85-Gram Edible Portion (Cooked)	% Daily Value
Energy (kcal)	174.54	
Protein (g)	23.64	47.27%
Total fat (g)	8.01	
Iron (mg)	1.85	10.30%
Magnesium (mg)	20.15	5.04%
Potassium (mg)	236.04	6.74%
Sodium (mg)	60.00	2.50%
Zinc (mg)	4.55	30.31%
Selenium (ug)	14.30	20.43%
Thiamin (mg)	0.09	6.14%
Riboflavin (mg)	0.28	16.25%
Niacin (mg)	5.10	25.48%
Pantothenic acid (mg)	0.61	6.10%
Vitamin B-6 (mg)	0.20	10.09%
Vitamin B-12 (ug)	2.38	39.64%
Vitamin E (mg)	0.08	
Saturated fat (g)	3.23	
Monounsaturated fat (g)	3.26	
Polyunsaturated fat (g)	0.48	
Cholesterol (mg)	79.69	
Cholesterol (mg) per 100g	93.77	

Iron. Lamb offers a number of benefits for iron status. It is a good source of iron with a 3-ounce cooked portion containing, on average, 1.84 milligrams, slightly more than 10 percent of the daily value of 18 milligrams. Of further benefit is the heme form of iron in lamb. Dietary iron is available in two forms: heme iron, which originates only from animal tissues, and non-heme iron, which is derived from plant sources. Due to different means of absorption, heme iron is absorbed at a higher percentage than non-heme iron. Although some estimate diets containing primarily non-heme iron result in only 5 to 10 percent absorption of iron, the Recommended Dietary Allowances (RDA) estimates absorption of non-heme iron in the American diet with adequate vitamin C intake to be about 17 percent. Heme iron absorption is estimated at 25 percent or more (IOM, 2001). Interestingly, the meat (heme-containing) sources of iron included in the *2005 Dietary Guidelines for Americans* table of “Food Sources of Iron” are limited to several seafood items (clams, oysters, shrimp, and sardines), organ meats, beef, and lamb. Other common meats, such as fish, poultry, and even pork, are lower in iron. In addition to providing iron, lamb also provides protein important for the synthesis of new red blood cells containing adequate amounts of hemoglobin.

Zinc. As shown in Table 1, a 3-ounce portion of cooked lamb provides, on average, 4.55 milligrams of zinc, 30 percent of the daily value. As a component of many enzymes and proteins that regulate gene expression, zinc has many functions in the human body. A lack of adequate zinc can contribute to improper growth and development, reduce immune function, and delay wound healing (IOM, 2001; Andrews 1999). Zinc absorption is influenced by a number of factors. A plant-based diet high in phytate from whole grains reduces absorption; whereas, a diet high in animal protein promotes greater zinc absorption (IOM, 2001). Hence, lamb is an excellent source of zinc and has higher bioavailability than plant sources.

Selenium. Although the content of selenium varies from animal to animal, depending upon the selenium content supplied by the animal’s diet, lamb, on average, contains 14.3 micrograms per 3-ounce cooked portion of lamb qualifying it as an excellent source, providing 20 percent of the daily value. Selenium functions as an anti-oxidant, particularly as a component of the enzyme glutathione peroxidase (IOM, 2000).

Vitamin B-12. On average, a 3-ounce cooked portion of lamb provides 2.4 micrograms of vitamin B-12, about 40 percent of the daily value. Found only in animal products, vitamin B-12 functions as a co-enzyme for many important metabolic reactions. Low levels of the vitamin can manifest as anemia, neurological problems, and high levels of the amino acid homocysteine in the blood (IOM, 1998).

Niacin. Niacin is commonly found in meats, including lamb. A 3-ounce cooked portion contains, on average, 5.1 milligrams, 25 percent of the daily value. As a B vitamin, niacin functions as a co-enzyme, especially in reactions in which our body obtains energy from metabolism of food components (IOM, 1998).

Riboflavin. As a good source of riboflavin, a 3-ounce cooked portion of lamb provides, on average, 0.28 milligrams riboflavin, 16 percent of the daily value. Riboflavin, another B vitamin that functions as a co-enzyme, is important in metabolic reactions in which reduction and oxidation occurs (IOM, 1998). Not a common deficiency in the United States, symptoms of riboflavin deficiency (such as abnormalities in the tissues around the mouth, tongue, and throat) may be seen in individuals with an overall poor diet with multiple nutritional deficiencies (IOM, 1998).

Protein. Comparable to other meats, a 3-ounce cooked portion of lamb provides, on average, 24 grams protein, 47 percent of the daily value. Protein functions as a major structural component of all human cells. Protein is needed to synthesize enzymes, membranes, transport carriers, and hormones (IOM, 2005). Without adequate protein, growth is limited, healing is impaired, immune function is reduced, and muscle mass can decrease (IOM, 2005).

Fat. In terms of total and saturated fat, nutritional analyses in the USDA Nutrient Database, Release 19 (USDA Nutrient Database Laboratory) indicate that for a 3-ounce cooked portion of lamb, many cuts trimmed to ¼ inch or less fat meet the FDA definition for lean. In other words, a 100-gram cooked portion contains, on average, less than 10 grams fat, less than 4.5 grams saturated fat, and less than 95 milligrams cholesterol. These lean cuts include those from the leg and loin. Cuts with slightly higher amounts of fat include rib and some samples of shoulder blade.

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