

ALBERTA SHEEP

Lamb Meat - Nutrition

Healthy eating can provide the fuel to sustain one's energy levels that are essential in today's high paced society. Vitamins and minerals are also needed to support a healthy body. They are required for normal maintenance of body functions, resistance to disease, and the ability of the body to repair itself. To maintain optimal nutrition, and decrease your risk of developing deficiencies of key nutrients, choose a variety of foods from each food group to include in your daily menu.

Including lamb as part of a healthy diet is an excellent idea, as it provides essential nutrients to the body. *Canada's Food Guide to Healthy Eating* recommends consuming two to three servings of Meat and Alternatives daily.

Nutrition Information		
Based on a 100 gram serving of cooked lamb*		
	Average amount per 100 gram serving	Percent of Recommended Daily Intake**
Energy	266 kcal	12%
Vitamin B12	2.65 mcg	88%
Niacin (Vitamin B3)	11.48 NE	74%
Zinc	5.49 mg	55%
Protein	26.37 grams	40%
Riboflavin (Vitamin B2)	0.25 mg	23%
Iron	2.12 mg	22%
Vitamin B6	0.13 mg	13%
Magnesium	25 mg	11%
Folate (Folic Acid)	20 mcg	10%
Thiamin (Vitamin B1)	0.09 mg	10%

*These values are based on the average of 60 cuts (American Lamb) including a mix of lean and non-lean cuts and various cooking methods to reflect actual consumption.

**The values are expressed as a percentage of the average daily-recommended nutrient intake of an adult male and female across all (adult) ages.

Note: Where recommended daily intakes are related to energy, the average recommended daily energy intake amount was used as a basis for conversion.

Functions of Key Nutrients in Lamb

Protein - is made up of amino acids, of which nine cannot be synthesized or stored by the body. These nine essential amino acids must be supplied in the diet in order to make a complete protein. A high quality protein supplies all the essential amino acids in the correct proportions. Animal protein sources are of high quality complete protein. Requirements vary according to body size, nutritional status, and level of activity.

All cells in the body contain protein. Protein is essential for the growth, development, maintenance and repair of body tissues. It is involved in the transport of oxygen and nutrients throughout the body, the regulation of fluid balance, enzyme functions, and

has many other roles. Protein can also be used as a source of energy. Requirements are expressed in relation to energy.

Vitamins

Thiamin (Vitamin B1) – is a water-soluble vitamin required for energy production and nervous system function. Because only a small amount is stored in the body, thiamin must be supplied daily. More thiamin is required for energy production when energy expenditure is increased.

Riboflavin (Vitamin B2) – is a water-soluble vitamin required for the metabolism of protein, fats, and carbohydrates. It is necessary in the maintenance of healthy skin, nails and hair. It also aids in good vision. Riboflavin must be supplied daily in the diet. Requirements are expressed in relation to energy utilized.

Niacin (Vitamin B3) – is a water-soluble vitamin that assists in the metabolism and utilization of protein, fats, and carbohydrates. It is essential for a healthy nervous system, and for the production of sex hormones. Niacin intakes are expressed as “equivalents”. Tryptophan, an amino acid, can also be converted to niacin in the body. 60 mg of tryptophan yields 1 mg of niacin. Therefore, a food containing 60 milligrams of tryptophan contains the equivalent of 1 mg of niacin. Lean meats are rich sources of both niacin and tryptophan. Requirements are expressed in relation to energy.

Vitamin B6 – is a water-soluble vitamin that is required for the proper absorption of vitamin B12. It also has an important role in the metabolism and utilization of protein, fats, and carbohydrates. It is necessary for the production of antibodies and red blood cells, helps maintain the balance of sodium and potassium, and promotes the normal functioning of the nervous system. Also required for healthy skin, teeth and muscles. Dietary requirements for vitamin B6 are related to dietary protein intake.

Vitamin B12 – is a water-soluble vitamin required for the metabolism of protein, fats, and carbohydrates. It is essential for normal growth and tissue development, a healthy nervous system, and the formation of red blood cells. It also assists in many other body functions. Food sources of vitamin B12 are primarily of animal origin.

Folacin (Folic Acid) - aids in the formation of red blood cells, and is essential to the growth and reproduction of all body cells. In addition, it acts as a coenzyme with vitamin B12 and vitamin C in the metabolism and synthesis of proteins. Folacin is required for the normal development of the nervous system.

Minerals

Zinc – is an essential mineral that has many roles. It is necessary for many enzyme functions, and is required for the metabolism of protein, carbohydrate, and fat. It is also important for normal immune response and general growth and development of the organs and reproductive system.

Iron – is a mineral present in every cell of the human body. Some of the many important functions of iron include the formation of red blood cells, the transport and storage of oxygen throughout the body, and DNA synthesis. Dietary iron is composed of heme and non-heme iron. The heme iron found in animal protein is more efficiently absorbed than the non-heme iron found in vegetables. Ingesting a source of vitamin C with the iron containing food enhances its absorption.

Magnesium - most of the body's supply of magnesium is contained in the bones. It is essential for many enzyme reactions and the maintenance of DNA and RNA. Magnesium also has roles in energy metabolism, and is required for the normal functioning of nerves and muscles.

1. *Canadian Nutrient File*; Health Canada, Nutrition Research Division; 2001;
http://www.hc-sc.gc.ca/food-aliment/ns-sc/nr-rn/surveillance/cnf-fcen/e_index.html
2. *Nutrition Recommendations*; Health and Welfare Canada; 1990
3. *Health Canada Website*; http://www.hc-sc.gc.ca/food-aliment/e_index.html
4. *Recommended Nutrient Intakes for Canadians*; Health and Welfare Canada; 1986
5. *Understanding Nutrition 3rd Edition*; Whitney and Hamilton; West Publishing Company; 1984