

Nutri News

nutrition newsletter for health professionals from LMC

Issue 6 May—August 2008

GREETINGS FROM THE NUTRITION INFORMATION SERVICE AT LMC

Welcome to the sixth issue of Nutri News, a quarterly publication for health professionals focussing on the nutritional aspects of beef and lamb. In this sixth edition, we are including articles on a number of issues including the satiating power of protein rich foods; *Safefood's* review of the Beef Food Chain published this year, meat intakes as reported in the Low Income Diet & Nutrition Survey and an update on the EU Sixth Framework Programme, *ProSafeBeef*.

If you are reading this because a friend or colleague has passed it onto you, then we would be delighted to provide you with your own personal copy. Instructions for getting your own copy (by email) are at the back of this issue.

Hope you enjoy Nutri News.

Regards,
Geraldine Cuskelly,
PhD, SRD, BSc.

The Satiating Power of Protein: impact on losing weight

Eating protein-rich foods with your meals and snacks may help to curb hunger between meals. That's why enjoying plenty of lean protein, such as lean beef and lamb, as part of a healthy balanced diet may help with appetite control and weight loss.

IN THIS ISSUE

- **Satiating power of protein**
- **A review of the Beef Food Chain**
- **Low Income Diet & Nutrition Survey**
- **ProSafeBeef: what is it?**



Appetite management

A number of studies have found protein can help enhance the feeling of fullness between meals, more so than either carbohydrate or fat. Therefore protein helps to control hunger, which in turn helps to reduce food intake. So choosing foods that are higher in protein helps to manage appetite¹.

Weight loss

In studies where people chose how much they ate, they generally ate fewer calories and lost more body fat when they were on a higher protein diet, for up to a year. Since protein helps curb hunger it facilitates the ability to control calorie intake and result in more weight loss².

Weight maintenance

Once weight loss is achieved, maintaining that weight loss can be a challenge. Research shows that higher protein diets help preserve more muscle during weight loss and weight maintenance compared to higher carbohydrate diets. Since muscle actually helps the body burn more energy, having more muscle makes it easier to keep weight off³.

(contd. on page 2)

The Satiating Power of Protein: impact on losing weight

(contd. from page 1)

Overall health

Research has also shown that weight loss diets that are rich in lean protein can help improve blood triglyceride (fat) and blood glucose (sugar) levels. Lowered levels of these blood lipids and blood sugars help lower the risk of heart disease and diabetes⁴.

Does the Type and Form of Protein Impact Satiety?

Animal protein such as from red meat has been shown to produce a 2% higher energy expenditure than vegetable protein such as soy over the course of a day⁵.

The bottom line

According to research conducted in North America, incorporating additional lean protein, such as beef and lamb, representing up to 35% of energy intake as part of a balanced diet, can be a healthy and effective choice. Currently the average proportion of energy consumed as protein in the UK is 17%. Lean beef and lamb are excellent sources of high biological value protein.

1. [Marmonier C, Chapelot D, Louis-Sylvestre J](#) (2000). Effects of macronutrient content and energy density of snacks consumed in a satiety state on the onset of the next meal. *Appetite*. 34(2):161-8.
2. [Johnston CS, Tjonn SL, Swan PD](#) (2004). High-protein, low-fat diets are effective for weight loss and favorably alter biomarkers in healthy adults. *J Nutr*. 2004 134(3):586-91.
3. [Paddon-Jones D, Westman E, Mattes RD, Wolfe RR, Astrup A, Westerterp-Plantenga M](#) (2008). Protein, weight management and satiety. *Am J Clin Nutr*. 2008 87 (5):1558S-61S
4. [Layman DK, Clifton P, Gannon MC, Krauss RM, Nuttall FQ](#) (2008). Protein in optimal health: heart disease and type 2 diabetes. *Am J Clin Nutr*. 87(5):1571S-1575S.
5. Per B Mikkelsen, Søren Toubro and Arne Astrup (2000). Effect of fat-reduced diets on 24-h energy expenditure: comparisons between animal protein, vegetable protein, and carbohydrate. *Am J Clin Nutr*, Vol. 72, No. 5, 1135-1141.

“A review of the beef food chain” by Safefood, 2008

Earlier this year, Safefood published “A review of the Beef Food Chain”, a comprehensive review identifying opportunities to communicate the human health benefits to various stakeholders. Below is a summary of the main findings as they relate to Northern Ireland.

In focus groups conducted on behalf of Safefood, awareness of the various nutritional attributes of beef differs significantly between NI and RoI consumers. Whereas NI consumers are more likely to choose beef because “it tastes really good”, RoI consumers are more likely to choose beef because “I think it is good for me”, “...very good source of iron” and “...protein” and “...B vitamins”.

The Eating for Health Survey carried out in NI in 1999 (Health Promotion Agency 2001); found that 69% of adults surveyed reported eating red meat once or twice a week or less often. 31% reported eating it three times a week or more often. This survey also found that men reported eating red meat more often than women with 27% of women eating red meat three or more times a week compared to 36% of men.

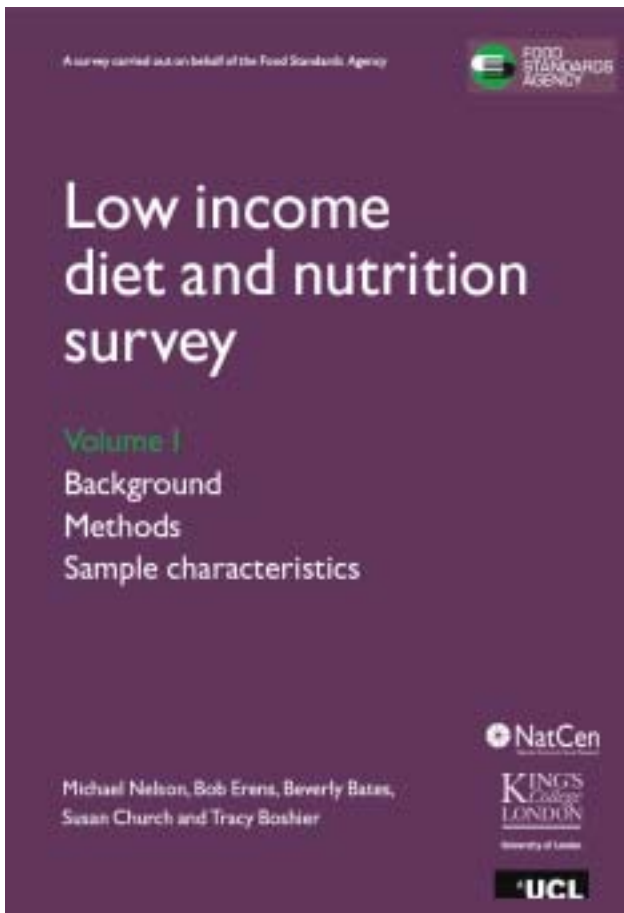


A Review of the
Beef Food Chain



LMC recommends adults consume lean beef and lamb 3-4 times per week.





Low Income Diet & Nutrition Survey: Findings on meat intakes

The Low Income Diet & Nutrition Survey (LIDNS) published last year, provided diet and nutrition intake data from a representative sample of 3,728 people (aged 4 years and older) from 2,477 households in the UK including an over-representation from Northern Ireland. It provides nutritional status information on the bottom 15% of the population in terms of material deprivation. Here we review the findings pertinent to red meat intakes, related nutrient status and comparisons with the National Diet & Nutrition Survey (NDNS).

The table below indicates a trend towards the lower income group (both adults and children) consuming more meat, but less oily fish, fruit and vegetables. Unfortunately, foods in the “beef, veal, lamb & pork & dishes” are categorised in a way that does not allow for easy identification of fresh meat v processed meat, or of beef and lamb v other red meats.

	Foods for which consumption was greater in LIDNS than in NDNS			Foods for which consumption was lower in LIDNS than in NDNS		
	4-18 yrs	19-64yrs	>65 yrs	4-18 yrs	19-64yrs	>65 yrs
Beef, veal, lamb & pork and dishes	√	√	√			
Processed meats	√	√				
Oily fish and canned tuna	√				√	√
Vegetables ¹			√	√	√	√
Fruit				√	√	√

¹ Vegetables does not include baked beans

Average daily intakes of most vitamins and many minerals were above or close to the Reference Nutrient Intake (RNI) in the different sex and age groups in both LIDNS and NDNS. For those where mean intakes fell below the RNI in specific age groups, this was usually the case for the same groups in both surveys. For example, women aged 19-64 years in both surveys had mean daily intakes of total iron, magnesium, potassium and copper below the RNI. However, low income women had lower mean intakes of these minerals, especially for iron (68% of RNI in LIDNS, 82% of RNI in NDNS). For total iron, magnesium and zinc, girls in LIDNS had higher intakes expressed as a percentage of RNI compared with girls in NDNS, possibly owing to their higher meat consumption.

Full version of LIDNS is available on the Food Standards Agency website at:
<http://www.food.gov.uk/science/dietarysurveys/lidnsbranch/>





ProSafeBeef is an Integrated Project funded by the European Commission under the Sixth Framework Programme. Through research and innovation, **ProSafeBeef** aims to advance beef safety and quality across Europe. This will enable the beef chain in Europe to thrive and diversify, and become more competitive and sustainable. The project involves 41 leading research and industrial organisations working in 18 different countries.

ProSafeBeef is a 5-year project which commenced in March 2007. Amongst the key objectives is:

Satisfying consumer demand for diversity and choice and both invigorate and add value to the beef chain by developing innovative processing techniques and products.

Despite the changing trends in our consumption of beef, it is important to recognise that healthy eating advice across Europe considers lean beef, consumed in moderation, to be an important part of a healthy balanced diet. In moderate amounts, together with starchy carbohydrates, plenty of fruit and vegetables, and moderate amounts of milk and dairy products, lean beef can provide many of the essential nutrients we need for good health and well-being, as well as for healthy growth and development in children. Beef contains high quality protein and an important range of vitamins and minerals.

Overall, lean beef consumed in moderation is an important part of a healthy balanced diet. But the nutritional value of beef does vary according to variation in the various cuts of meat, how the meat is prepared and cooked, and also differences in animal feeding. The *ProSafeBeef* project is divided into seven integrated pillars. Pillar 3 focuses on improving the nutritional and eating quality of beef and beef products whilst assuring safety for the consumer. Research will focus on factors leading to the development of nutritionally enhanced, more stable (oxidative) and better tasting beef, either as muscle cut directly from the carcass or as innovative value-added products from the rest of the carcass. Consumer attitudes and safety aspects of the new products will be taken into account throughout this pillar. LMC will continue to update *Nutri News* readers on *ProSafeBeef's* progress.

More information on *ProSafeBeef* is available on the project website:

<http://www.prosafebeef.eu/asp/>

Nutri News

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Your comments and questions

If you have any comments on any of the topics in this issue, please send them by email to: nutrition@lmcni.com or you can speak with the LMC Nutritionist directly by telephoning 9263-3000.

If there are any topics you would like to see covered, we would be very glad to receive your comments and ideas.

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