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RE: MEAT, general health and well-being:

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Public health messages



Public health messages about meat can be quite confusing. On the one hand, meat and meat products have been blamed for many of the health problems of modern society. On the other hand, however, meat and meat products have also been portrayed as essential to the body's ability to maintain health and resist disease. They have been central to dietary regimens such as the [Atkins diet](#), and have provided the basis for a number of

therapeutic interventions, such as liver extract in [anaemia](#).

Debates about the healthiness of meat and its derivatives are often intertwined with broader intellectual concerns about the **appropriate treatment of animals**, the **morality** of meat-eating, **anxieties** about modern farming, processing and **preservation** methods, and worries about the influence of commercial, advocacy and political interests on nutrition policy and dietary habits.

At the end of 2007, the World Cancer Research Fund ([WCRF](#)) released a [report](#) (slow download speed) in which it recommends to **"limit consumption of red meat (such as beef, pork and lamb) and avoid processed meat"**. Those recommendations have promptly raised the attention of media, consumers, authorities, industry and society as a whole. In tackling public health messages, it is important to choose the **right instrument**, which is not always the case. Information is frequently driven by a part of "consumers" committed in the creation of political pressure.

Diets high in meats have been cited as causes of cancer, heart disease, and obesity. Meat-eating has been central to debates about outbreaks of BSE, typhoid, foot-and-mouth disease and **public anxieties** about avian flu. It has also raised more general concerns about food preparation and preservation.

The **value of scientific research** on health issues is unanimously recognised; however, this kind of red light/green light information should be avoided. Only a proper **science-based approach** supplied with an **appropriate strategy for communication** would allow the enhancing of consumer confidence which is always sought by business operators.

Last but not least, it is important to recall that **statistics** can help people make decisions about which behaviour to have; however, unless your work involves dealing with statistics, you may have difficulty understanding what they mean.

Reflection on a science-based approach

The science-based approach should explore the many different perspectives on meat and health from those of vegetarians, health activists, and animal activists to those of the meat industry, policy makers and regulators. In doing so, it should also seek to explore the many different uses and meanings of meat in the current society and its cultural attitudes on diet and nutrition.

As emerged in several instances (see UECBV- N-112-2008-EN), the **multidisciplinary approach** is to be preferred to tackle items linked to the relationship of meat consumption and “health”, they require the use of several disciplines shifting from nutrition to epidemiology, human health, animal health, dietetics, statistics, science mass communication ...

The Belgian Association of Meat Science and Technology ([BAMST](#)), sharing this advice, recently held a meeting with some researchers who are very famous at international level. They debated the WCRF findings and, while recognising the value of the work done, they agreed on the fact that cancer is a very complex disease with many contributing factors (including: physical activity, obesity, smoking, alcohol consumption, diet, as well as family history and age) and on the fact that research findings on red meat and augmented risk of colorectal cancer are not adequately known and/or clarified.

All participants agreed that a balanced diet, exercise and healthy body weight are keys to good health. Some highlights:

- The **amount of nitrite/nitrate** used for feature of meat products is most probably not the main cause of augmented risk and this fact is felt more strongly now than it was in the past;
- Cooking certain meats at high temperatures creates chemicals (on the surface of well-done meat, cooked at high temperature) that are not present in uncooked meats. Heterocyclic amines (HCAs) form when amino acids (the building blocks of proteins) and creatine (a chemical found in muscles) react at **high cooking temperatures** (e.g. fried, or barbecued meats). Poultry meat has been quoted as an important source of HCAs (e.g. fast food restaurants).
- Epidemiologic results are significantly changed promoting a food regime containing substances preventing cancer, **substances to integrate** to the ingestion of meat and meat products. Mention was made of some antioxidants (BHA), fruit and vegetables, olive oil and high calcium foods (e.g. dairy products).



The concerns about public health have led to recommendations to the public to modify their diet, popularised as Dietary Guidelines. These frequently recommend a reduction in meat consumption, and consequently, this has led in some sections of their populations to a relative increase in the consumption of poultry and fish at the expense of red meat. The **consumption of red meat itself has come under**

fire.

This notwithstanding, the scientific productions from all around the world explain the **nutritional role that red meat plays in a healthy, balanced diet**. Containing **iron**, it provides many other nutrients that are essential for good health. In particular, it is an important source of protein, which is needed to help cells grow and repair themselves. Good amounts of protein have also been linked to improving satiety –the feeling of fullness at the end of a meal–, so low-fat foods that contain good amounts of protein may help with **weight control**.

Red meat is also a **nutrient-dense food**. This means that it contains a wide variety of nutrients in a relatively small amount of food. In particular, it contains a range of **vitamins and minerals**, including **zinc**, **selenium**, [vitamin B12](#) and **vitamin D**. It is an especially good source of vitamin B12, which is important for **healthy blood**, and is only found naturally in foods that come from animals such as red meat, poultry, fish, eggs and dairy products. Red meat is also a source of **heart-healthy unsaturated fats**.

In fact, lean beef and pork actually contain more polyunsaturates and monounsaturates than saturates. Meat also contains small amounts of **omega-3 fats**, which help keep the heart healthy. With the exception of oil-rich fish, few foods contain good amounts of omega-3s. This makes the small amounts in red meat an important source, especially for people who eat little or no oil-rich fish.



A [recent study](#) showed that pregnant women who do not get enough vitamin B-12 may have a greater risk of delivering a baby with **birth defects**. In a study of nearly 1,200 women in today's Pediatrics, women with the lowest B-12 levels were five times as likely to have a baby with a neural tube defect compared with mothers with the highest levels. Most women in the USA get enough of the vitamin, the study shows. Another sign useful to explain how much a more balanced diet is key to a good health status.

Meat-eating people

Several operators along the EU food chain, as well as in other countryside, reacted to some **food-related international public health messages** that slowly but continuously are targeting products of animal origin.

The French **CIV** (Centre d'information des viandes), after the publication of the WCRF report and the consequent French national programme on nutrition and healthiness ([PNNS](#), with auxiliary recommendations for health professionals), carried out a review of such reports warning on the need to avoid **confusions and interpretation mistakes among journalists** in judging some "findings". They pointed out several points deserving special attention. For instance, those studies refer to different contexts dating back to more than twenty years ago. The average quantity of meat consumed in France per day is lower than the one "targeted" as a risk. They pointed out the fact that the average of so-called "big" meat-eating people (more than 70 g per day) is almost one half of those considered "feeble meat-eating" people. Commenting on epidemiology, they noted once again some inappropriate uses of statistics and epidemiological findings to create lists of recommendations on "international" public consumption whether the study of factors affecting the health and illness of population depends on the targeted population. They are currently working on a relevant action plan and preparing two different documents in order to communicate: the one for health professionals and the other for general public, to give them some appropriate answers.

In addition to that, it is important to recall that the "US population typically consumes diets high in meat and saturated fat and low in fruit, vegetables and whole grains. This dietary pattern might increase the risk of heart disease, certain types of cancer, stroke and diabetes – four of the leading causes of death in the USA. The costs due to poor diet for just these four diseases are estimated to exceed \$33 billion per annum¹.

The report on "[The Role of Red Meat in Healthy Australian Diets](#)", published as a supplement in Nutrition & Dietetics, September 2007, is a comprehensive review of the evidence supporting red meat's role in a healthy diet.

This interesting scientific review goes through several aspects mentioned in the foregoing about the nutritional role that red meat plays in a healthy, balanced diet.

It is also interesting to note that a useful [advisory service](#) for red meat and health started last April in the United Kingdom in which one of the UK's top nutritionists, Dr Kellow, is on hand to answer online questions about red meat and its role in a balanced diet.

¹ Frazao E. High costs of poor eating patterns in the United States. In: Frazao E, ed. America's Eating Habits: Changes and Consequences. Agriculture Information Bulletin No. 750. Washington, DC: Economic Research Service, US Department of Agriculture, 1999; 5–32.

Juliette says: *People feel bombarded with health information these days. So often they are not sure what information is correct and what is not – especially when it comes to a universally popular food like red meat.* Juliette also recently edited Meatandhealth.com²

Red Meateorite: blasting away the myths about red meat – which contains a series of quirky and serious facts about red meat, its history and current role in the diet.

Some conclusions

Various stakeholders as well as health professionals may agree to recognise the value of raising awareness of the healthiness of a balanced diet, investing significantly in the promotion of research and science-based information to consumers.

Nutrition research and appropriate communications programmes are essential in maintaining confidence in the health and safety of red meat among consumers, health professionals and health organisations and provide a solid base for a successful industry.

Debates about the healthiness of meat and its derivatives are often intertwined with broader intellectual concerns (about the appropriate treatment of animals, the morality of meat-eating, anxieties about modern farming and political interests on nutrition policy and dietary habits). Demand for animal foods will inexorably continue to increase worldwide as the population growth allows the adoption of the high-meat/high-fat diet now typical in the USA.

According to many of the concepts recalled also in this paper, when the amount of food and saturated fat consumed exceeds nutritional needs, it might be responsible for increased rates of heart disease, stroke and some cancers. In contrast, it is important to underline that a balanced diet, exercise and healthy body weight are keys to good health and that only appropriate communications programmes might help the general public reach relevant nutrition policy goals without creating **false myths** and through scientific facts and not in the course of a consumer or industry perception of risk.

USEFUL LINKS

[UECBV – \(N-112-2008-EN\) - Meat and Health](#)

[UECBV – \(N-147-2008-EN\) - Summary report of a meeting of COM WG on NUTRIENT PROFILE](#)

[UECBV – \(N-058-2008-EN\) - Nutrient Profiling and Consumer Information](#)

[EUROPA - Health & Nutrition Claims](#)

[EUROPA - Nutrition Labelling](#)

² Meatandhealth.com is the Meat and Livestock Commission's guide for consumers and health care professionals, offering up to date nutritional information and resources designed to help maintain a healthy balanced diet.