

Hormonal Growth Promotants and Beef

What are hormonal growth promotants?

Hormonal growth promotants are the natural sex hormones which are administered to animals in order to improve an animal's ability to use nutrients efficiently. Synthetic derivatives of the natural hormones may also be used instead of the natural hormones themselves.

Why are hormonal growth promotants used?

Hormonal growth promotants, and the synthetic derivatives, are used to improve an animal's ability to use nutrients efficiently. Beef producers use hormonal growth promotants because they:

- ✓ improve meat quality by increasing the development of lean meat and decreasing fat content;
- ✓ increase feed efficiency, thereby allowing more growth with less feed;
- ✓ reduce costs for producers thereby reducing the price of meat and meat products for consumers and keeping beef production in Canada competitive with other beef-producing nations

Does hormone use affect the safety of beef?

The safety of growth promoting hormones in beef has been extensively reviewed by many government regulatory authorities and international agencies including Health Canada and the US Food and Drug Administration, as well as by expert committees of the United Nations World Health Organization and the Food and Agricultural Organization. The safety of the growth promoting hormones has also been evaluated by an expert panel convened by the World Trade Organization in response to concerns raised by Canada, the United States and the European community.

In all cases, the evaluation process has concluded that the use of growth promoting hormones, in accordance with Canadian practice, does not present a risk to those consuming beef or beef products. Use of the growth promoting hormones is permitted in Canada, the United States and many other highly developed countries around the world. Similarly, the World Trade Organization, the World Health Organization and the Food and Agricultural Organization have all concluded that growth promoting hormones can be used safely in beef production.

How much hormone does beef contain?

Many foods contain hormones naturally, whether they are from plant or animal origin. Hormones occur naturally in all animals. Various studies have shown that the amount of hormone in beef is extremely small, regardless of whether or not the animal was treated with growth promoting hormones. In fact, the amount of hormone in a serving of beef from a treated animal is virtually indistinguishable from the amount of hormone in a serving from an untreated animal. Studies have demonstrated that more variation in natural hormone levels may exist between animals of different sexes than between treated and non-treated animals.

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How much hormone does beef contain? *cont'd ...*

Recognizing that the hormone levels in beef from untreated animals is in the same range as the hormone levels in beef from treated animals, the World Health Organization and the Food and Agricultural Organization have concluded that there is no need to establish safe levels, so-called Maximum Residue Limits (MRL), of residues of the natural hormones in beef from treated animals. The expert committees have established safe levels of the synthetic hormones which, even with daily lifetime consumption, would not be expected to be associated with any adverse effect.

How does the amount of hormones in beef compare to that of humans?

The greatest source of hormones for humans does not come from foods of plant or animal origin. The greatest source is the human body itself. For example, a man's body produces 15,000 times more estrogen than would be consumed in a 500 gram portion of meat, and the body of a pregnant woman produces several million times more.

In fact, for humans the greatest exposure to hormones from an external source comes from the oral contraceptives (birth control pills) used by more than 40 million women worldwide. The average daily dose from oral contraceptives is 2,500 times greater than the amount found in a serving of beef. Evaluations carried out by government regulatory authorities and international health agencies have concluded that the growth promoting hormones can be used safely.

How does the Canadian government regulate the use of hormones in beef production?

The use of all veterinary drugs in Canada, whether in food producing or companion animals, is strictly regulated by the Bureau of Veterinary Drugs of Health Canada. It is a violation of federal law to use any veterinary drug in Canada until the Bureau has issued a "Notice of Compliance", a legal term used to indicate that the drug has met all of the safety and effectiveness requirements imposed by federal regulation. Drugs, such as the growth promoting hormones, which are used in food producing animals, must meet stringent safety requirements in order to demonstrate that they can be used safely in the target animal (the species for which the drug is intended) and that their use will not pose a risk to consumers of the food commodity.

In order to obtain a Notice Of Compliance, the proponent must *first* demonstrate that the drugs:

1. pose no risk to humans
2. are an effective treatment
3. are safe for the animal, and
4. are manufactured according to federal regulations to ensure the consistent quality of the drug product.

Drugs that do not meet all of these requirements are not approved for sale in Canada.

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How does the Canadian government monitor the use of hormones in beef production?

In addition to the strict requirements which must be met in order to obtain approval to sell, and to use, the growth promoting hormones in Canada, Canada's national food safety authority, the Canadian Food Inspection Agency (CFIA), conducts regular monitoring programs in which thousands of samples of all meat products are analyzed to ensure that any drug residues which remain in meat are well within lawful, and safe, limits. Results of these monitoring programs are published regularly by the CFIA.

Since residue levels of the natural hormones in beef are in the same range in both treated and untreated animals, Canadian regulatory authorities have concluded that it is not necessary to establish so-called safe limits of the natural hormones. CFIA monitors for residues of the synthetic hormones and Canadian regulations do not permit residues of any of the synthetic hormones to be present in meat. And year after year, Canadian beef has been in virtually 100% compliance, that is, there are no residues in the beef.

In addition to the various government regulations which must be met to ensure safety, *Quality Starts Here*, a beef producer-driven, on-farm quality assurance program, provides further guidance to beef producers on the safe use of hormonal growth promotants.

What would happen if hormonal implants were not used?

Because hormones occur naturally, if the growth promoting hormones were not used, there would be little variation in the hormone content in beef. However, beef would likely cost more due to the increased length of time and quantity of feed needed for cattle to grow to market weight.

Why has the European Community banned the importation of beef produced with aid of the growth promoting hormones?

This is a very complex international trade issue and has little to do with the safety of beef to consumers. The European Community has argued that its ban is justified because of concerns regarding the safety of beef produced with the aid of the growth promoting hormones.

In separate legal actions in 1997, the Governments of Canada and the United States asked the World Trade Organization (WTO), the international arbiter of trade disputes, to evaluate the scientific validity of the claims of the European Community. The WTO convened a panel of internationally recognized experts to review the issue of the safety of use of the growth promoting hormones. In its decision – published in August, 1997 – the WTO concluded that the safety of the beef was not the issue and ordered the Community to bring its policies and practices in line with internationally accepted standards.

Although the Appeal of the decision by the Community has raised a number of legal barriers to implementation of the WTO ruling, the fundamental conclusion of the WTO remains unchanged. In addition, an expert joint panel convened in 1999 by the UN World Health Organization and the UN Food and Agricultural Organization also concluded that the use of growth promoting hormones in beef production was not a safety issue to consumers.