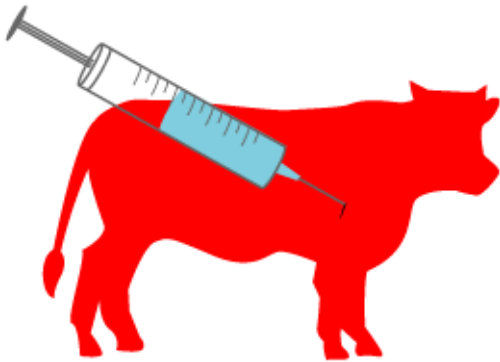


## **Growth Hormones in Animal Products**

The global demand for food is at an all-time high. Livestock producers are becoming increasingly reliant on growth hormones to improve product quality and make overall production methods more efficient. While use of growth hormones may increase profits for the food industry and reduce costs for consumers, there are potential health risks.

### **Why are growth hormones used in animals?**

Hormones are naturally occurring chemicals that help regulate functions such as growth, development and reproduction in all animals. However, when hormones are administered to animals, they help produce lean meat with decreased fat content, promote a faster growth rate with less feed and increase milk production in dairy cows. According to current federal



regulations, six different steroid hormones are approved for use in cattle and sheep and prohibited in poultry and swine. Of these six hormones, three, estradiol, progesterone and testosterone, are naturally occurring and three, zeranol,

trenbolone and melengestrol, are synthetic. Recombinant bovine growth hormone (rBGH) is a synthetic version of bovine growth hormone, an additional hormone that is approved by the Food and Drug Administration (FDA) to increase milk production in dairy cattle [1].

### **Is growth hormone use in food production safe?**

Currently, there is great concern among the general public about whether or not hormone residues in animal products are safe to consume. This is fueled by policies adopted by countries in the European Union, Canada, Japan and Australia that either ban or restrict the use of growth

hormones in food production. Although there is no conclusive evidence, the European Union's Scientific Committee for Veterinary Measures relating to Public Health (SCVMPH) agrees that hormone residues in meat products increase risks for developmental, neurobiological, genotoxic and carcinogenic effects. One hormone in particular, 17- $\beta$ -oestradiol, is considered to be a complete carcinogen with tumor initiating and tumor promoting effects. Because of these safety concerns, all hormone residue levels in animal products are strictly regulated based on established tolerance levels by the American Center for Veterinary Medicine (CVM). These tolerance levels are based on naturally occurring hormone levels in the body for the endogenous hormones and on toxicological testing in laboratory animals for the synthetic hormones. Even though hormone residue levels are well regulated, it is still hard to tell what effect synthetic hormones will have on the human body since no human in vivo studies have been done with them [2]. It is also important to note that continuous exposure to growth hormones, even in low concentrations, is linked to increased incidence of cancer, sexual disorders and a decrease in the male to female hormone ratio [3].

### **What are current recommendations?**

Although the risks associated with growth hormones in animal products are still up for debate, consumers concerned about the use of growth hormones can take several steps to minimize their potential health risks. Milk and other dairy products labeled "rBGH free" are widely available in the market along with organic animal products that are antibiotic and growth hormone free. Poultry and pork are also viable options for concerned consumers since they are raised without the use of growth hormones.

### **References:**

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