

Research paper on hormones affects on COWS

[Parts of the World](#), [Europe](#)



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Introduction

In the year 2005, a total of 32.49 million cows were slaughtered and the products supplied for consumption to the United States residents. According to the perception of the scientists, more than half of these cows contained hormones that could enhance their fast growth (King 22). In addition, in the daily milk-producing cows, genetically modified hormones were injected to enhance an increase in the level of milk production (King 22). These measures meant that there could be an increase in the profit in this industry of beef and dairy products production. However, what does this mean to the children who are at their puberty stage? Although these hormones have continually been assured to be safe by the FDA and USDA, there has been a great concern that the milk and meat residues have a possibility of being harmful to the teenager's early development (Kiley 2). This paper evaluated

how these hormones affect the growth of the human beings; particularly children at the puberty stage.

The Contentious Issue of Hormonal Injection in the Cows

The Western diets have been dominated by the meat and other dairy products (Kiley 2). Basically, there has been a popular perception that as a result of adding two milk grasses to a daily diet, there is enhanced development of the muscles and bones mass. What many people however fail to realize is the harmfulness of components that are used to develop the final dairy products.

What the Beef Contains and its Effects

According to a scientific committee of the European Union on the veterinary procedures, incorporating artificial and natural growth enhancing hormones in the production of beef has a high likelihood of posing a risk to the health of human beings (Leung et al. 36). These hormones are inclusive of testosterone, progesterone, and oestradiol; all of which occur naturally. The remaining hormones are synthetic and are inclusive of melengestrol, trembolone, and zeranol (Leung et al. 36). In this committee, the ability of the hormone residues in these animals to disrupt the development of hormone balance was assessed. Through this effect, it was established that the human reproductive health system has a likelihood of being interfered with together with resulting to other developmental problems, which include early development of breast, colon and prostate cancer (Leung et al. 36).

Basically, it has been established that these hormones pose a great risk to the children at their early stages of puberty development. Therefore, as a

result of the hormone residues effects that are present in the beef, the early onset of puberty has been the result in these young children. This early development exposes these children to an even higher risk of developing various types of cancerous diseases. According to the report by the European Union Committee, the studies on the cancer effect of beef have not been carried out until in the recent five years (King 24).

Studies have also been conducted by the scientists on the effect posed by these artificially injected hormones on the manure. According to the research, the hormones that promote the growth not only remain in the consumed meat but also pass through the digestive system to be egested with the manure. As the manure coming from these farms enters the environment, the ground water and surface is contaminated in the process. The most vulnerable to the creatures from these hormones are found in the aquatic water (Raloff 10). Therefore, as a result of being exposed to the hormones, there is a considerable effect on the reproductive capacity and gender. This affects the balancing of the naturally occurring cycle.

How the Hormones Affect the Cows

According to Riley (4), Somatotropin is a naturally occurring protein that is developed in the animals' pituitary gland. With the Bovine Somatotropin (BST), the nutrients trigger a rapid increase in the cattle growth together with an increased speed in the lactation process. The production of artificial BST incorporates the technology of recombinant DNA that is in short referred to as rBST. Commonly referred to as the growth hormone, the rBST increases

the production of milk by more than 15 percent once injected in the cows. In long run, this production increases up to a level of 17 percent.

According to a study conducted by Leung and colleagues (37), the injection with this hormone has been blamed for the increase in the deformity in calves and the dramatic increase in the cases of infection with mastitis. This infection result in a swelling inflammation that triggers pus accumulation and secretion of blood into milk. According to the rBGH critics, the use of this hormone has resulted in subsequent use of antibiotics, which over time have resulted to the development of a bacterium that is resistant to these antibiotics. In addition, the Federal Government's programs for testing milk antibiotic residues are sometimes characterized with inadequacies. The FDA has relied on pasteurization to enhance killing of the hormones, antibacterial and antibiotics that are present in milk (Leung et al. 37).

The effects on human health

According to Kiley (4), the twenty first century girls are having their maturity occurring earlier when compared to the children in previous generations. This factor raises concern that something seems to be going on differently with the behavior and attributes of the women. In a study that was conducted by the United States Agricultural Department, 2. 2 billion pounds of cheese were produced by the dairy industry in the year 1970. By this time, the United States had a population of 203 million people. Twenty years later, the growth of the American population had reached 248 million people and the cheese consumed was worth more than 10. 0 billion pounds. This approximately represents 20 pounds consumed by each person. In 1994, an

average of 28 pounds of cheese was consumed in America. By the onset of the new millennium, the consumption of this cattle product hit 30 pounds and of late, the rate of increase in consumption has been skyrocketing. In order to produce one pound of cheese, ten pounds of milk are required. Therefore, for the production of thirty pounds of cheese, three hundred pounds of milk will be required. With the consumption of the concentrated milk in cheese form, this simply means that concentrated hormones are being consumed in every other intake.

In a study by Food Standards Australia and New Zealand (23), it is established that every cow's milk sip has more than 50 different hormones. Milk acts as a hormonal delivery system. Through this milk, the nursing infants are provided with the perfect food from nature. From thousands of journals provided on related studies, the immunoglobins, lactoferrins and hormones in the milk are perceived to provide massive benefits through which the humans can be nursed. This implies that through the work of milk hormones, powerful effects are exerted. In each animal species, a different formula is present. In the cow's milk, there are various hormones and when the milk is used for nursing purposes, these hormones are delivered to the human beings.

As the little girls transform into adults during their puberty period, the average amount of hormone produced is equivalent to one tablespoon. The working of the hormone is usually on a nanomolecular lever. This implies that producing a mammoth biological effect will take less than a billionth gram of hormone. Therefore, the biggest question is whether the young

children need to be allowed to ingest prolactin, progesterone and oestrogen every other day. Should these young people consume milk from the cow, this is exactly what they are being allowed to do. Their daily consumption is in addition being characterized with intake of ice cream and cheese therefore implying an ingestion of concentrated forms of these hormonal formulas.

With this consumption being hardly avoidable as these various dairy products continue being the teens favorite, the next question would be to further understand if is a bad thing to have an early sexual maturity. In an examination by the Boston women's hospital, data from Harvard nurse study participants were studied. According to the findings, 2, 356 out of the 64, 000 participants developed complications related to breast cancer (Kiley 4). Taller height in adults and earlier menarche were prognostic of the risk of breast carcinoma. This work clearly portrayed evidence of the risk of breast cancer as being influenced by the factors of parenthood. Therefore, as the study concluded, the efforts towards prevention need to start at the adolescence and childhood age as this may be useful some day in adult life.

Critics have however challenged the development of a scientific test through which this theory can be verified. Such an experiment was carried out in a whole country where the consumption of milk was unknown until 1946 (King 23). Since the year 1946, Japan has interviewed 20, 000 persons from 7, 000 families followed by a comprehensive analysis of their diets alongside their heights and weight (King 23). Other factors that have been considered in these analyses are the age at the onset of puberty and rates of cancer growth. The onset of puberty was measured through assessing the period

when the menstruation begins in the young girls (King 24). In the year 1978, the Preventive Medicine presented the study results.

As a result of losing on the war and its occupation by the American troops, Japan had undergone a period of devastation. This process was referred to as Americanization and was inclusive of changes in the diet. The significance of dairy products such as milk was increasing in the Japanese diet. This study approximated the dairy product consumption in 1950 to be 5.5 pounds. In the year 1970, this average consumption had increased to 118 pounds. In the year 1950, the approximate weight of a twelve year old girl was 70 pounds with a height of 4.'6". However, by the year 1975, these figures changed as a result of changing the diet and incorporating milk and dairy products, which contained bioactive products. The new measurements were characterized by an increase in the weight by 19 pounds and increase in height by five inches. In addition, as a result of introduction to these dairy products, the menstrual cycle onset had changed from the earlier period of 15 years in 1950 to 12 years in 1975.

Who is monitoring?

Although there have been various international concerns, the growth promoting hormone has continually been promoted in Canada and the United States. However, this move has highly been discouraged by the European Union, which has prohibited importation of the beef from cows treated with growth enhancing hormone from the United States. As a result of this ban, the United States has been challenged at the World Trade

Organization. Currently, there is still a raging debate between the European Union and the United States over the validity of this ban.

According to Powers (332), the ugly truth is that injection with growth hormones has dominated the production trend in many cattle producing farms. The use of bovine hormone in the United States is not a new issue as it has for long enhanced increased milk and beef production. This trend has challenged emergence of various current debates on the way forward in this trend. Although a lot of concern has been expressed by an increasing number of scientists and consumers on the human risk potential of this practice, more than six stimulants of growth have been approved by the FDA and USDA in the beef cultivation. The stimulants (also referred to as hormone growth promotants) have been approved only by a few countries with strong ban being upheld in many of the countries.

In the United States, a strong controversy surrounds the fact that no labeling enforcement has been approved when packaging the food with growth hormone. A new twist of debate has been generated by a recent study that has made a strong case on the contentious injections of cattle. This debate on cattle injection has hence been revolving around four major issues; who are the beneficiaries of the growth hormones, the welfare and health of the animals, the environmental concerns and food safety.

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