

*peer-reviewed**systematic review**people, animals*

Oestrogens in cows' milk are unlikely to pose a threat to adult health

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Oestrogens found naturally in cows' milk are likely to be safe for human consumption in adults, according to a new review published in the [European Journal of Endocrinology](#). The review brings together scientific evidence from over a dozen rodent and human studies that examined the effects of ingesting oestrogen-containing cows' milk on fertility and the risk of cancer development. The findings of the review suggest that the levels of oestrogens found naturally in milk are too low to pose health risks to adults, and that there is no need for public concern.

Oestrogens, female sex hormones, are naturally present in cows' milk and, with over 160 million tons of cows' milk farmed in the EU in 2016 alone, it is a common constituent of the human diet. Intensive farming practices have been shown to increase the levels of oestrogens found in milk, which has raised concerns about their potentially detrimental effects on human health. Ingesting oestrogens may have wide-reaching effects on health, including reduced fertility, altered foetal development or an increased risk of hormone-related cancers.

In this review, Professor Gregor Majdic and Professor Tomaz Snoj from the University of Ljubljana in Slovenia, reviewed the scientific evidence from over a dozen studies that assessed the safety of ingesting oestrogen-containing milk, in both rodents and humans. In the majority of studies where rats were fed milk, or oestrogens derived from milk, no differences in reproductive health or cancer risk were observed. The studies that did report changes in reproductive function or other harmful effects investigated levels of oestrogens that greatly exceed the amount of milk a person might normally consume. Although some human studies have suggested that milk ingestion can affect growth hormone levels in children it remains unclear whether this association is related to ingestion of oestrogens, or whether there are any other adverse effects on their health. However, the strength of the evidence from the majority of the reviewed studies would suggest that oestrogen levels in milk are too low to affect the health of adults. Although, this study only examined the possible effects of oestrogens and not the other potential harmful or beneficial health effects of cows' milk.

Professor Gregor Majdic said, "The majority of studies we reviewed concluded that the concentrations of oestrogens found naturally in milk are too low to pose a risk to reproductive health or cancer development in adults. However, studies are lacking that look at any harmful effects of hormones from cows' milk on baby and child development and health."

Professor Gregor Majdic now plans to study the effects of oestrogens in cows' milk on development and reproductive systems in the young. Although the oestrogen levels in milk appear to be safe for adults additional work is needed to investigate whether babies and children may be more susceptible to their potentially harmful effects.

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Notes for Editors

1. The study, “Estrogens in consumer milk – is there a risk to human reproductive health?” will be published in the *European Journal of Endocrinology* on 27 October 2018
2. For copies of the paper, or any other press enquiries, please contact the European Society of Endocrinology press office:

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3. [European Journal of Endocrinology](#) (EJE) is the official clinical journal of the European Society of Endocrinology, publishing high-quality original research and review articles on all aspects of clinical and translational endocrinology from around the globe. *European Journal of Endocrinology* is published by [Bioscientifica](#).
4. At the [European Society of Endocrinology](#) (ESE), we are working together to develop and share the best knowledge in endocrine science and medicine. ESE represents a community of over 20,000 European endocrinologists, enabling us to inform policy makers on health decisions at the highest level through engagement in advocacy efforts across Europe. It is by uniting and representing every part of the endocrine community that we are placed in the best possible position to improve life for the patient.