

# Example of environmental hormone mimics essay

[Health & Medicine](#), [Cancer](#)



## **Environmental Hormone Mimics**

Hormone mimics are types of chemicals in the environment that mimic the natural hormones in the body. Wagner and Oehlmann (1999) list three pathways xenohormones (foreign hormones) enter the body. When the xenohormones enter the body it is called “ xenohormones uptake.” They are (1) breathed in from the air, (2) absorbed from body lotions, perfumes and deodorants, and (3) eaten with food that has been stored in containers or plastic wrap containing the chemicals.

Estrogen, androgen and thyroid hormones are “ chemical messengers” made by glands (like the thyroid gland and adrenal gland) to regulate different processes in the body ( EPA, 2011). The foreign hormones from the environment disrupt the natural processes because they mimic these natural hormones.

In 1996 the Environmental Protection Agency put into action a plan to evaluate approximately 87, 000 chemicals to learn whether or not they were dangerous to human hormones and to wildlife hormones (animals, birds and fish).

Then in 1996 the U. S. Congress wrote two laws directing the EPA to find those chemicals that disrupted hormones specifically in humans. So the EPA formed the Endocrine Disruptor Screening and Testing Advisory Committee (EDSTAC) in order to work to meet the required goals. (Wu, 1998).

Wagner and Oehlmann (1999) found that plastic bottled mineral water was a source of hormone mimics. And also that food which has been wrapped in plastic wrap containing xenohormones was also a source. (Wagner and

Oehlmann, 1999).

Payne, Scholz and Kortenkamp (2011) explain that breast cancer and testicular cancer are becoming more frequent around the world. It's very difficult to design and carry out a study to try to understand how estrogenic and estrogen-like agents act as hormone mimics. Payne, Scholz and Kortenkamp (2011) worked to overcome the problem in their research by careful experiment design and controls. Their study concluded " that o, p'-DDT, p, p'-DDE, [Beta]-HCH, and p, p'-DDT act together to produce proliferative effects in MCF-7 cells" (Payne, Scholze and Kortenkamp, 2011).

The problem of hormone mimics has been recognized for decades. The connection of the hormone mimics to breast cancer is being studied but the research is very difficult. Now the research is getting to the point of becoming more sophisticated. Better methods will be developed to research this problem as research continues. This research is important because cancer seems to impact everyone.

## References

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