Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
2009 Volume V: Evolutionary Medicine

Endocrine Disruptors in Our Drinking Water: Should We Be Concerned?

Guide for Curriculum Unit 09.05.07
by Nancy J. Schmitt

Scientific studies of water sources, streams and rivers have shown there is a measurable quantity of hormones and other pollutants in the water. Our water systems may be contaminated by medicines, antibiotics, birth control pills, vitamins, and menopausal drugs we take to feel healthier, and get better faster. As we use these items, some inevitably get into our water supply and may be impacting our food and water sources. This may be a factor in the evolution of humans and animals. How fast is this happening? Can it be quantified? Should we be concerned?

A growing body of scientific research indicates that many man-made industrial chemicals and pesticides may interfere with the normal functioning of human and wildlife endocrine systems. These endocrine, or hormone, disruptors may cause a variety of problems with development, behavior, and reproduction. Deformed and feminized fish and frogs may be the result of contaminants in the water. This unit will discuss some of the current issues facing our water supply. The lesson plans are a collection of real-life math problems using the challenges facing our water supply as context.

(Developed for Algebra I, grade 9; recommended for Algebra I, grade 9, and Algebra II, grade 11)