

Toxicology Topics in Brief Endocrine Disruptors

Many essential biological processes in humans and other organisms are controlled by hormones. The

(hormones) into the blood that fulfil numerous functions, including regulating metabolism and growth, tissue function, mood, and reproduction.

have the potential to cause harm. Some can mimic natural hormones, although often only very weakly compared to the natural endogenous hormones. Others block or prevent the normal action of hormones, while others can work indirectly by increasing the removal of hormones from the blood by stimulating metabolism in the liveWh.15 31s.38 Inm 9@18C\$r1.15 510.38 404.92 reWhBT6rg0 0.286 0.463 RC()]TJET@MC.QA



Should we be concerned about endocrine disruptors?

It is difficult to say with certainty whether endocrine disruptors should be a cause for great concern at the levels most of the population encounter

in their daily lives. The majority view in the UK is that current exposures are too low to be causinwst of the popu



Endocrine disruptors and low dose effects

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a substance does not cause harm. For example, selenium is a naturally occurring chemical element that is essential to human health in trace amounts. However, at high doses selenium is toxic. In extreme cases, too much of the element can lead to cirrhosis of the liver, pulmonary oedema and even death.

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These scientists contend that there is no safe level of endocrine disruptors as there is for other chemicals.

Food Safety Authority and the Food and Drug Administration in the US agree that existence of low dose effects has not been conclusively established. Concerns have been raised about the risk that exposure to low levels of several EDCs, the concern being what is the combined effect, particularly if they potentially affect the same aspect of the endocrine systems by different mechanisms. This is part of the general concern about the possible risks from the exposure to low levels of a large mixture of chemicals via the environment. There is much research activity on this topic and the way this concern can be incorporated into regulatory risk assessment.

Suspected endocrine disruptors

Many substances which are endocrine active / suspected endocrine disruptors are used in the manufacture of everyday items. In many cases, the European Union has taken precautionary measures to reduce the exposure of the most vulnerable members of society. Other governments have also taken action to reduce exposure to these substances. While human beings have evolved in an environment where they are exposed to natural endocrine active substance items. In 507ltance items. In 507ltance ite(e)-3(a)-4(ct)3(iv)4(e)-3(subr3(