

Questions in science

Can we lead a chemical-free life?

Narrator:

Some people think chemicals are something we should avoid and are drawn to products labelled as "chemical-free". This is probably because they believe they are inherently more healthy in some way. However we can't avoid chemicals and all chemicals aren't inherently unhealthy. The chair you are sitting on, the food you are eating, the clothes you are wearing are all made of chemicals. Chemicals make up everything around us.

While some chemicals do have dangerous properties, such as high toxicity, many are highly beneficial for our lives. Simply labelling chemicals as good or bad is overly simplistic.

Naturally occurring are not necessarily less dangerous than those produced in a laboratory too.

Dosage is one of the most important factors in determining the harmfulness of any chemical. Even drinking too much water could be harmful.

Many chemicals that are incredibly important and useful are synthesised. For example, many useful chemical compounds can be generated from naturally occurring crude oil.

Crude oil is a mixture of many different compounds comprised of carbon and hydrogen and is formed from organic matter that chemically transformed over millions of years.

Around 5% of crude oil is converted into compounds that are used in essential chemicals, including, pesticides, medicines, and plastics, all of which have a huge impact on our daily lives.

Therefore, we can understand that whilst some chemicals may be hazardous, hazardous chemicals will not all be synthesised in a lab, with many synthetic chemicals being essential to our way of life. We can also understand that it is not possible to lead a life without chemicals.

To discover more about the chemicals in the world around us, and develop your scientific thinking, explore our introductory science module Questions in Science.

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