



guardians of drinking water quality
DRINKING WATER INSPECTORATE

Pharmaceuticals and drinking water

What is the problem?

The possibility that prescription medicines may get into drinking water has been the subject of research since the 1960s. Public concern generally centres on the possibility that components of the birth control pill might get into river water through waste water discharges. More recently popular concern has focused on the oestrogen components of the birth control pill because oestrogens belong to a group of substances known as endocrine disrupters. More information on endocrine disrupters sometimes known as EDCs can be found [here](#).

What has the research shown?

The research in the UK initially developed highly sensitive analytical methods to detect ethynyl oestradiol, an active ingredient of the most popular brands of birth control pill. The method can detect very low nanogram levels in water (1 part in 1 million x 1 million). Studies also investigated whether conventional water treatment removed ethynyl oestradiol. The findings confirmed that both filtration and disinfection were very effective in destroying and removing ethynyl oestradiol from water.

Other European wide research has confirmed that pharmaceutical residues could be found in waste water but levels in river water downstream of waste water discharges were almost always at very low concentrations of less than 1µg/l (microgrammes per litre). These studies also confirmed the susceptibility of pharmaceutical residues to drinking water treatment.

How do water companies protect drinking water?

By law water companies must assess the risk from pharmaceuticals being present in river water used for drinking water and where a risk is identified they must monitor the raw water and have suitable water treatment in place.

All of the research and monitoring by water companies means that the public can be confident that pharmaceutical residues such as components of the birth control pill are not present in tap water.

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