

## Leftover or out of date medicines



We live in a highly medicated world. Any drug that is excreted through the kidneys rather than metabolised in the liver will end up in the sewer. This leads to the contamination of rivers, lakes and streams with pharmaceutical residues. Tiny quantities of antidepressants in water can affect wildlife, such as crustaceans and molluscs. Drugs affect the behaviour and biological make-up of these creatures, including changing their colour, growth and reproduction patterns. In recent studies, the most frequently detected active chemicals in our rivers were caffeine, antidepressants, anticonvulsants, antibiotics, anti-inflammatory substances, cholesterol lowering drugs (anti statins) and diabetes treatments. There is also the problem that antibiotics that escape into the river can reach levels that are not safe and risk the development of resistant bacteria.

There are groups working to reduce the chemicals excreted by livestock, but we also need to tackle residues of medication from human use. Not everyone knows about medicine take-back schemes. Unopened, unused and out-of-date medicines can be taken to the local pharmacy, rather than flushed down the toilet and into the sewer system. **Yealm Medical Centre dispensary** will accept unused or out of date medicines that they have dispensed, for safe disposal. All other medicines can be taken to other pharmacies, or to Derriford Hospital if they were prescribed there (e.g. treatments for cancer that cannot always be prescribed by a GP).

The main problem with local water treatment is the combined sewer system in which ground water is not separated from sewage. This means it is more difficult to treat the sewage effectively to remove impurities. Medicines are difficult to filter out at sewage treatment plants and end up in our rivers and eventually the sea. Water companies have proposed a record £105 billion investment which includes reducing pharmaceutical residues. And there are more private sewage treatment systems than usual in Devon, owing to the difficulty of connecting up houses in remote areas to the mains sewage system. These systems are not designed to remove chemicals.

We can all help by taking the trouble to dispose of medicines safely, rather than tipping them down the toilet!

River Yealm Water Quality Group



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