

# TOXIC DRINK



AP

## Pharmaceuticals found in drinking water, affecting wildlife and maybe humans

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A VAST array of pharmaceuticals — including antibiotics, anti-convulsants, mood stabilisers and sex hormones — have been found in the drinking water supplies of at least 41 million Americans, an Associated Press investigation shows.

To be sure, the concentrations of these pharmaceuticals are tiny, measured in quantities of parts per billion or trillion, far below the levels of a medical dose. Also, utilities insist their water is safe.

But the presence of so many prescription drugs — and over-the-counter medicines like acetaminophen and ibuprofen — in so much of the nation's drinking water is heightening worries among scientists of long-term consequences to human health.

In the course of a five-month inquiry, the AP discovered that drugs have been detected in the drinking water supplies of 24 major metropolitan areas — from Southern California to Northern New Jersey, from Detroit to Louisville, Kentucky.

### How do the drugs get into the water?

People take pills. Their bodies absorb some of the medication, but the rest of it passes through and is flushed down the toilet. The wastewater is

### THE WATER AMERICANS DRINK



■ Officials in Philadelphia discovered 56 pharmaceuticals or byproducts in treated drinking water, including medicines for pain, infection, high cholesterol, asthma, epilepsy, mental illness and heart problems. Sixty-three pharmaceuticals or byproducts were found in the city's watersheds.

■ Anti-epileptic and anti-anxiety medications were detected in a portion of the treated drinking water for 18.5 million people in Southern California.

■ Researchers at the US Geological Survey analysed a Passaic Valley Water Commission drinking water treatment plant, which serves 850,000 people in Northern New Jersey, and found a metabolised angina medicine and the mood-stabilising carbamazepine in drinking water.

■ A sex hormone was detected in San Francisco's drinking water.

■ The drinking water for Washington DC, and surrounding areas tested positive for six pharmaceutical drugs.

treated before it is discharged into reservoirs, rivers or lakes. Then, some of the water is cleansed again at drinking water treatment plants and piped to consumers. But most treatments do not remove all drug residue.

And while researchers do not yet understand

the exact risks from decades of persistent exposure to random combinations of low levels of pharmaceuticals, recent studies — which have gone virtually unnoticed by the general public — have found alarming effects on human cells and wildlife.

"We recognise it is a growing concern and we're taking it very seriously," said Benjamin H. Grumbles, assistant administrator for water at the US Environmental Protection Agency.

Members of the AP National Investigative Team reviewed hundreds of scientific reports, analysed federal drinking water databases, visited environmental study sites and treatment plants and interviewed more than 230 officials, academics and scientists. They also surveyed the nation's 50 largest cities and a dozen other major water providers.

The situation is undoubtedly worse than suggested by the positive test results in the major population centres documented by the AP. The federal government doesn't require any testing and hasn't set safety limits for drugs in water.

Of the 62 major water providers contacted, the drinking water for only 28 was tested. Among the 34 that haven't: Houston, Chicago, Miami, Baltimore, Phoenix, Boston and New York City's Department of Environmental Protection, which delivers water to nine million people.

The AP's investigation also indicates that watersheds, the natural sources of most of the nation's water supply, also are contaminated. Tests were conducted in the watersheds of 35 of the 62 major providers surveyed by the AP, and pharmaceuticals were detected in 28.

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