

## Research names top 11 compounds in tap water

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LAS VEGAS — New research has identified the 11 most frequently detected pharmaceutical and hormonally active chemical compounds in the drinking water of 19 US water utilities, a January 12 NewScientist.com [article](#) reported.

Researchers Shane Snyder and colleagues at the Southern Nevada Water Authority in Las Vegas screened tap water from 19 US water utilities for 51 different compounds. The research, which is scheduled to appear in the next issue of the journal *Environmental Science & Technology*, indicates that all of the 11 most frequently detected compounds were found at extremely low concentrations.

According to the NewScientist.com article, the 11 most frequently detected compounds were:

- Atenolol, a beta-blocker used to treat cardiovascular disease
- Atrazine, an organic herbicide banned in the European Union but still used in the United States, which has been implicated in the decline of fish stocks and in changes in animal behavior
- Carbamazepine, a mood-stabilizing drug used to treat bipolar disorder, among other things
- Estrone, an oestrogen hormone secreted by the ovaries and blamed for causing gender-bending changes in fish
- Gemfibrozil, an anti-cholesterol drug
- Meprobamate, a tranquilizer used in psychiatric treatment
- Naproxen, a painkiller and anti-inflammatory linked to increases in asthma incidence
- Phenytoin, an anticonvulsant that has been used to treat epilepsy
- Sulfamethoxazole, an antibiotic used against the *Streptococcus* bacteria, which is responsible for tonsillitis and other diseases
- TCEP, a reducing agent used in molecular biology
- Trimethoprim, an antibiotic.

Christian Daughton, Ph.D., of the US Environmental Protection Agency's (EPA) National Exposure Research Laboratory, said in the report that neither this nor other recent water assessments give cause for health concern. He added, "But several point to the potential for risk — especially for the fetus and those with severely compromised health."

Snyder said in the report that water utilities could make drinking water purer; however, the costs of "extreme purification" are huge in terms of increased energy usage and carbon footprint, cautioning that ultra-pure water might not even be safe.