

Alcohol could intensify the effects of some drugs in the body

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(Medical Xpress) -- Scientists are reporting another reason — besides possible liver damage, stomach bleeding and other side effects — to avoid drinking alcohol while taking certain medicines. Their report in ACS' journal *Molecular Pharmaceutics* describes laboratory experiments in which alcohol made several medications up to three times more available to the body, effectively tripling the original dose.

Christel Bergström and colleagues explain that beverage [alcohol](#), or ethanol, can cause an increase in the amount of non-prescription and prescription drugs that are “available” to the body after taking a specific dose. Alcohol can change how enzymes and other substances in the body interact with many of the 5,000 such medications on the market. Some of these medications don't dissolve well in the gastrointestinal tract — especially in the stomach and intestines. The researchers sought to test whether ethanol made these drugs dissolve more easily. If so, this would make the drugs more available in the body, possibly intensifying their effects when combined with alcohol.

To find out, the scientists used a simulated environment of the small intestine to test how rapidly medications dissolved when alcohol was and was not present. Almost 60 percent of the 22 medications in their tests dissolved much faster in the presence of alcohol. In addition, they found that certain types of substances, such as those that were acidic, were more affected. Some common acidic drugs include warfarin, the anticoagulant; Tamoxifen, used to treat certain forms of cancer; and naproxen, which relieves pain and inflammation.

More information: “Ethanol Effects on Apparent Solubility of Poorly Soluble Drugs in Simulated Intestinal Fluid”, *Molecular Pharmaceutics*, 2012, 9 (7), pp 1942–1952. [DOI: 10.1021/mp2006467](https://doi.org/10.1021/mp2006467)

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