

PeriodicGraphics

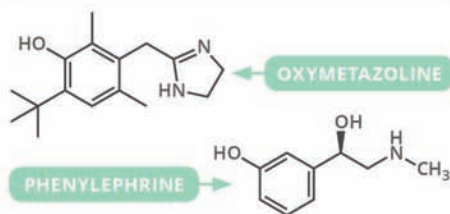
With Compound Interest

A collaboration between C&EN and Andy Brunning, chemistry educator and author of the popular graphics blog Compound Interest. To see more of Brunning's work, go to compoundchem.com.

THE CHEMISTRY OF COLD MEDICINES

Suffering from a cold as we edge toward winter? No matter what your symptoms, chemistry can help ease your discomfort. Here's a look at some of the medicines that might lend a hand.

DECONGESTANTS



Decongestants ease a stuffed nose by reducing the swelling of blood vessels around the sinuses. Phenylephrine is popular even though scientists have questioned its efficacy. Oxymetazoline is much more effective.

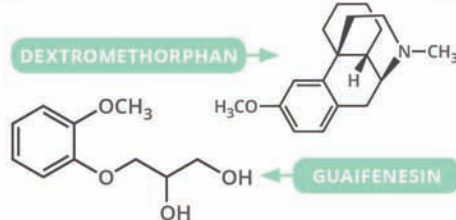


BLOCKED NOSE



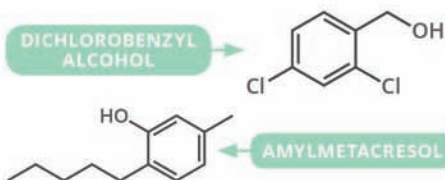
COUGH

SUPPRESSANTS/EXPECTORANTS



Dextromethorphan is an example of a cough suppressant. Guaifenesin is an expectorant—a drug that helps bring up phlegm. Demulcents such as glycerol, also found in cough medicines, coat the throat to ease irritation.

ANTISEPTICS



Many throat lozenges contain either dichlorobenzyl alcohol or amylmetacresol—or both in combination. They have an antiseptic effect, soothing sore throats. Evidence that they actually reduce the duration of throat infections is mixed.

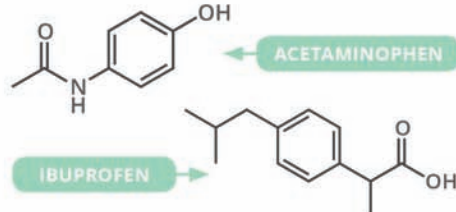


HEADACHE



SORE THROAT

PAINKILLERS



Painkillers such as acetaminophen (more commonly known by its brand name Tylenol or paracetamol) and ibuprofen can help relieve inflammation, although exactly how they work is still unknown.



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