

little to others. For example, the chemical name of aspirin is 2-acetyloxybenzoic acid, and morphine's chemical name is (5.alpha., 6.alpha.)-7,8-didehydro-4,5-epoxy-17-methylmorphinan-3,6-diol. Complicated chemical names would be difficult for the health-care professional to memorize.

Once a drug clears phases I to III of clinical trials, it is ready to be put on the market and is given a **brand** or **trade name** (also sometimes called a *proprietary name*), to which the company owns the rights. Because the brand name is used in advertising, the company selects a name that is easy to remember and may indicate the drug's purposes. For example, Restoril® helps patients sleep. Another example is Aleve®, which helps relieve pain. The initial letters of brand names are capitalized. A brand name is usually followed by the letters R or TM with circles around them, to signify that the name is a registered trademark and no other manufacturer can use that name during the patent period.

Once a drug's patent period has ended, the drug's trademark status is not protected, so other companies may produce the drug under its common or **generic name** (Table 4-2). No one except the manufacturer holding the trademark status can use the brand name, but other companies can manufacture the drug. Because these other companies did not do the research or spend as much on marketing, they can produce the medication much more cheaply than the original manufacturer.



### CRITICAL THINKING

Drug names can reflect their treatment effect. Try to determine what the drugs listed here could be used for, and then check a drug reference book to see how close you were.

Azmacort	Lipitor
Bronkaid	NasalCrom
Elimite	Nicoderm
Flexeril	Pepcid
Glucotrol	Rythmol

How did you do?

**TABLE 4.2** Sample Drug Names

Chemical Name and Structure	Generic Name	Brand Name(s)
N-acetyl-p-aminophenol $C_8H_9NO_2$	acetaminophen	Tylenol Paracetamol Mapap Panadol
N[2-[[[5-[(dimethylamino)methyl]-2furanyl]methyl]thio]ethyl]-N'-methyl-2-nitro-1,1-ethenediamine, HCl $C_{13}H_{22}N_4O_3S$	ranitidine hydrochloride	Zantac Deprizine
L-3,3',5,5'-tetraiodothyronine sodium salt $C_{15}H_{11}I_4NO_4$	levothyroxine	Synthroid Levoxyl Tirosint Levothroid
4-[2-(tert-butylamino)-1-hydroxyethyl]-2-(hydroxymethyl)phenol $C_{13}H_{21}NO_3$	albuterol	Ventolin Proventil
Calcium;(E,3R,5S)-7-[4-(4-fluorophenyl)-2-[methyl(methylsulfonyl)amino]-6-propan-2-ylpyrimidin-5-yl]-3,5-dihydroxyhept-6-enoate $C_{44}H_{54}CaF_2N_6O_{12}S_2$	rosuvastatin	Crestor
Magnesium; 5-methoxy-2-[(4-methoxy-3,5-dimethylpyridin-2-yl)methylsulfinyl]benzimidazol-1-ide; trihydrate $C_{34}H_{42}MgN_6O_9S_2$	esomeprazole	Nexium