



## LOOK-ALIKE / SOUND-ALIKE DRUGS

Confusing drug names is a common system failure. Unfortunately, many drug names can look-alike / sound-alike other drug names, which may lead to potentially harmful medication errors. Increasingly, pharmaceutical manufacturers and regulatory authorities are taking measures to determine if there are unacceptable similarities between proposed names and products on the market. But factors such as poor handwriting or poorly communicated oral prescriptions can exacerbate the problem.



Below is a list of the most problematic look-alike and sound-alike drug names. Examples of potential errors and consequences specific to each of the problem drug names are provided.

POTENTIAL PROBLEMATIC DRUG NAMES	POTENTIAL ERRORS & CONSEQUENCES
Avandia (rosiglitazone) & Coumadin (warfarin)	Poorly handwritten orders for Avandia have been misread as Coumadin. Mix-ups originally occurred due to unfamiliarity with Avandia. Staff read the order as the more familiar Coumadin. However, mix-ups between these two products continue to occur. Neither product is safe without appropriate monitoring that is specific to the drug.
Celebrex (celecoxib) & Celexa (citalopram hydrobromide) & Cerebyx (fosphenytoin)	Patients affected by a mix-up between these 3 drugs may experience a decline in mental status, lack of pain or seizure control, or other serious adverse events.
Catapres (clonidine) & Klonopin (clonazepam)	The generic name for clonidine can easily be confused as the trade or generic name for clonazepam.
Ativan (lorazepam) & Xanax (alprazolam)	These benzodiazepines have different potencies. A mix-up, especially in the elderly, would cause excessive sedation and increase fall risk.
Flagyl (metronidazole) & Glucophage (metformin)	Potentially serious mix-ups between these 2 drugs have been linked to look-alike packaging (both bulk bottles and unit dose packages) and selection of the wrong product after entering MET as a mnemonic.

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Topamax (topiramate)  
& Toprol-XL (metoprolol)

Error is likely attributable to the similarity in names with the “X” in XL of the beta-blocker, Toprol XL, looking like the ending of Topamax, an anticonvulsant. In addition, available dosage strengths (25, 50, 100 and 200mg) are identical, adding to the likelihood of mix-up. Imprint on the Topamax tablet is “TOP” on one side and 25mg strength has “25” on the other, risking confusion with Toprol XL 25mg. Patients needing Topamax may develop seizures and/or have adverse effects with Toprol XL. Patients needing a beta blocker may have worsened disease symptoms without treatment. These products might be stored near one another if medications are stocked alphabetically by brand name or might appear near one another on computer screens.

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Adrenalin (epinephrine)  
& ephedrine

The names of these 2 medications look very similar, and their clinical uses make storage near each other likely, especially in obstetrical areas. Both products are available in similar packaging ( 1ml amber ampuls and vials).

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Vistaril, Atarax (hydroxyzine)  
& hydralazine

Because the first 4 letters of their names are identical they are frequently stored next to one another on pharmacy shelves and automated dispensing cabinets and listed adjacently on computer screens. Their similar dosage strengths (10, 25, 50 and 100mg) and tablet dosage forms also contribute to confusion. Confusion between the antihistamine (hydroxyzine) and the antihypertensive agent (hydralazine) could lead to serious adverse drug events.

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Zyprexa (olanzapine)  
& Zyrtec (cetirizine)

Name similarity has resulted in frequent mix-ups between the two. Patients who receive Zyprexa in error have reported dizziness, sometimes leading to a related injury from a fall. Patients on Zyprexa for a mental illness have relapsed when given Zyrtec in error.

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### OTHER NAME PAIRS HAVING ERROR REPORT RATINGS

Acetohexamide – acetazolamide	lamivudine – lamotrigine
Advicor – Advair	Leukeran – leucovorin calcium
Amicar – Omacor	MS Contin – Oxycontin
Avinza – Evista	Mucinex – Mucomyst
Cardura – Coumadin	Prilosec – Prozac
Darvocet – Percocet	Retrovir – Ritonair
Diabeta – Zebeta	tizanidine – tiagabine
Diflucan – Diprivan	Wellbutrin SR – Wellbutrin XL
Effexor XR – Effexor	Zantac – Xanax

Folic acid – leucovorin calcium (folinic acid )	Zantac – Zyrtec
heparin – Hespan	Zestril – Zyprexa
hydrocodone – oxycodone	Zestril – Zetia
idarubicin – doxorubicin – daunorubicin	Zocor – Zyrtec

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## **GENERAL RECOMMENDATIONS FOR PREVENTING DRUG NAME MIX-UPS**

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Whenever possible, determine the purpose of the medication before dispensing or drug administration. Most products with look-alike or sound-alike names are used for different purposes.

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On verbal or telephone orders, read back all orders, spell the product name, state its indication, verify strength and dosage form.

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Provide counseling and verify that the medication and directions match what the prescriber has told them.

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