



food + drug

INTERACTIONS



Medicines can treat and cure many health problems. However, they must be taken properly to ensure that they are safe and effective. Many medicines have powerful ingredients that interact with the human body in different ways, and diet and lifestyle can sometimes have a significant impact on a drug's ability to work in the body. Certain foods, beverages, alcohol, caffeine, and even cigarettes can interact with medicines. This may make them less effective or may cause dangerous side effects or other problems.

When you take medicine, be sure to follow your doctor's and pharmacist's instructions carefully to obtain the maximum benefit with the least risk. Changes in a medicine's effect due to an interaction with food, alcohol or caffeine can be significant; however, there are many individual factors that influence the potential for such variations, like dose, age, weight, sex, and overall health.

This brochure has information about possible interactions between many common prescription and nonprescription (over-the-counter) medicines with food, alcohol, and caffeine. This brochure should not replace the advice from your physician, pharmacist, or other health care professional. If you have any questions or concerns about possible drug interactions, consult your health care professional.

Make sure your doctor and pharmacist know about every drug you are taking, including nonprescription drugs and any dietary supplements such as vitamins, botanicals, minerals, and herbals. If you have problems or experience side effects related to medication, call your health care provider right away. It is also important to remember that many drugs interact with other drugs and may cause serious medical conditions.

In this brochure, the generic (nonproprietary) name for each drug is stated first. Brand names are in full capital letters **and represent only some examples of those trademarked drugs**. Drugs are categorized by the conditions they treat.

Allergies

Antihistamines

Antihistamines are used to relieve or prevent the symptoms of colds, hay fever, and allergies. They limit or block histamine, which is released by the body when we are exposed to substances that cause allergic reactions. Antihistamines are available with and without a prescription (over-the-counter). These drugs vary in their ability to cause drowsiness and sleepiness.



Examples

brompheniramine/DIMETANE, BROMPHEN
cetirizine/ZYRTEC
chlorpheniramine/CHLOR-TRIMETON
clemastine/TAVIST
diphenhydramine/BENADRYL
fexofenadine/ALLEGRA
loratadine/CLARITIN

Interactions

Food: It is best to take some prescription antihistamines on an empty stomach to increase their effectiveness.

Alcohol: Avoid alcohol because it may increase the drowsiness and dizziness that can be caused by antihistamines.

Arthritis and Pain

Analgesic/Antipyretic

They treat mild to moderate pain and fever.

Example

acetaminophen/TYLENOL

Interactions

Food: For rapid relief, take on an empty stomach because food may slow the body's absorption of acetaminophen.

Alcohol: Avoid or limit the use of alcohol, because alcohol

use with this drug can increase your risk of liver damage or stomach bleeding. If you consume three or more alcoholic drinks per day talk to your doctor or pharmacist before taking this drug.

Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)

NSAIDs reduce pain, fever, and inflammation.

Examples

aspirin/BAYER, ECOTRIN
celecoxib/CELEBREX
ibuprofen/MOTRIN, ADVIL
nabumetone/RELAFEN
naproxen/ANAPROX, ALEVE, NAPROSYN

Interactions

Food: Because these drugs can irritate the stomach, it is best to take them with food or milk.

Alcohol: Avoid or limit the use of alcohol because chronic alcohol use can increase your risk of liver damage or stomach bleeding. If you consume three or more alcoholic drinks per day talk to your doctor or pharmacist before taking these drugs. Buffered aspirin or enteric coated aspirin may be preferable to regular aspirin to decrease stomach bleeding.

Corticosteroids

They are used to provide relief to inflamed areas of the body. Corticosteroids reduce swelling and itching and help relieve allergic, rheumatoid, and other conditions.

Examples

cortisone acetate/CORTEF
methylprednisolone/MEDROL
prednisone/DELTASONE
prednisolone/PEDIAPRED, PRELONE

Interactions

Food: Take with food or milk to decrease stomach upset.

Narcotic Analgesics

Narcotic analgesics are available only with a

prescription. They provide relief for moderate to severe pain. Codeine can also be used to suppress cough. Some of these drugs can be found in combination with non-narcotic drugs such as acetaminophen, aspirin, or cough syrups. Use caution when taking these drugs: take them only as directed by a doctor or pharmacist because they may be habit forming and can cause serious side effects when used improperly.



Examples

codeine combined with acetaminophen/
TYLENOL #2, #3, and #4
hydrocodone with acetaminophen/
VICODIN, LORCET
meperidine/DEMEROL
morphine/ROXANOL, MS CONTIN
oxycodone combined with acetaminophen/
PERCOCET, ROXICET

Interactions

Alcohol: Avoid alcohol because it increases the sedative effects of these medications.

Asthma

Bronchodilators

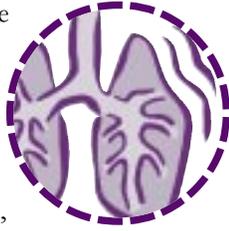
Bronchodilators are used to treat the symptoms of bronchial asthma, chronic bronchitis, and emphysema. These drugs open air passages to the lungs to relieve wheezing, shortness of breath, and troubled breathing.

Examples

albuterol/VENTOLIN, PROVENTIL,
COMBIVENT
epinephrine/PRIMATENE MIST
montelukast/SINGULAIR
theophylline/SLO-BID, THEO-DUR,
THEO-DUR 24, UNIPHYL

Interactions

Food: The effect of food on theophylline medications can vary widely. High-fat meals may increase the amount of theophylline in the body, while high-protein, low-carbohydrate meals, and charcoal-broiled foods may decrease it. It is important to check with your pharmacist about which form you are taking because food can have different effects depending on the dose form (e.g., regular release, sustained release, or sprinkles). For example, food has little effect on Theo-Dur and Slo-Bid, but food increases the absorption of Theo-24 and Uniphyll which can result in side effects of nausea, vomiting, headache and irritability. Food can also decrease absorption of products like Theo-Dur Sprinkles for children.



Caffeine: Avoid eating or drinking large amounts of foods and beverages that contain caffeine (e.g., chocolate, colas, coffee, tea) because both oral bronchodilators and caffeine stimulate the central nervous system.

Alcohol: Avoid alcohol if you're using theophylline medications because it can increase the risk of side effects such as nausea, vomiting, headache, and irritability.

Cardiovascular Disorders

There are numerous drugs used to treat cardiovascular disorders such as high blood pressure, angina, irregular heart beat, and high cholesterol. These drugs are often used in combination to enhance their effectiveness. Some classes of drugs can treat several conditions. For example, beta blockers can be used to treat high blood pressure, angina, and irregular heart beats. Check with your doctor or pharmacist if you have questions on any of your medicines. Some of the major cardiovascular drug classes are:



Diuretics

Sometimes called “water pills,” diuretics help eliminate water, sodium, and chloride from the body. There are different types of diuretics.

Examples

bumetamide/BUMEX
furosemide/LASIX
hydrochlorothiazide/HYDRODIURIL
metolazone/ZAROXOLYN
triamterene/DYRENIUM
triamterene/hydrochlorothiazide/DYAZIDE,
MAXZIDE

Interactions

Food: Diuretics vary in their interactions with food and specific nutrients. Some diuretics cause loss of potassium, calcium, and magnesium. Triamterene, on the other hand, is an example of a potassium-sparing diuretic. Such diuretics blocks the kidneys' excretion of potassium, which can cause hyperkalemia (increased potassium). Excess potassium may result in irregular heartbeat and heart palpitations. When using potassium-sparing diuretics, avoid eating large amounts of potassium-rich foods such as bananas, oranges, and green leafy vegetables, or salt substitutes that contain potassium.

Beta Blockers

Beta blockers decrease the nerve impulses to the heart and blood vessels. This decreases the heart rate and the work load of the heart.

Examples

atenolol/TENORMIN
metoprolol/LOPRESSOR
nadolol/CORGARD
propranolol/INDERAL

Interactions

Alcohol: Avoid drinking alcohol with propranolol/INDERAL, because the combination lowers blood pressure too much.

Nitrates

Nitrates relax blood vessels and lower the demand for oxygen by the heart.

Examples

isosorbide dinitrate/ISORDIL,
SORBITRATE
nitroglycerin/NITROSTAT, NITRO-DUR,
TRANSDERM-NITRO,
NITROLINGUAL SPRAY

Interactions

Alcohol: Avoid alcohol because it may add to the blood vessel-relaxing effect of nitrates and result in dangerously low blood pressure.

Angiotensin Converting Enzyme (ACE) Inhibitors

ACE inhibitors relax blood vessels by preventing angiotensin II, a vasoconstrictor, from being formed.

Examples

captopril/CAPOTEN
enalapril/VASOTEC
lisinopril/PRINIVIL, ZESTRIL
moexipril/UNIVASC
quinapril/ACCUPRIL

Interactions

Food: Food can decrease the absorption of captopril and moexipril. So take captopril and moexipril one hour before or two hours after meals. ACE inhibitors may increase the amount of potassium in your body. Too much potassium can be harmful. Make sure to tell your healthcare professional if you are taking potassium supplements or diuretics (water pills) that may increase the amount of potassium in your body. Avoid eating large amounts of foods high in potassium such as bananas, green-leafy vegetables, and oranges.

HMG-CoA Reductase Inhibitors/ Statins

These drugs are used to lower cholesterol by working to reduce the rate of production of LDL (bad cholesterol). Some of these drugs also lower triglycerides. Recent studies have shown that pravastatin can raise HDL-C (good cholesterol) reduce the risk of heart attack, stroke, or miniature stroke in certain patient populations.

Examples

atorvastatin/LIPITOR
fluvastatin/LESCOL
lovastatin/MEVACOR
pravastatin/PRAVACHOL
simvastatin/ZOCOR

Interactions

Alcohol: Avoid drinking large amounts of alcohol because it may increase the risk of liver damage.

Food: Lovastatin/MEVACOR should be taken with the evening meal to enhance effectiveness.

Anticoagulants

Anticoagulants help to prevent the formation of blood clots.

Example

warfarin/COUMADIN

Interactions

Food: Vitamin K produces blood-clotting substances and may reduce the effectiveness of anticoagulants. So limit the amount of foods high in vitamin K (such as broccoli, spinach, kale, turnip greens, cauliflower, and brussel sprouts). High doses of vitamin E (400 IU or more) may prolong clotting time and increase the risk of bleeding. Talk to your doctor or pharmacist before taking vitamin E supplements.

Infections

Many different types of drugs are used to treat infections caused by bacteria and fungi. Some general advice to follow when using any such product is:

- Tell your doctor about any skin rashes you may have had with antibiotics or that you get while taking this medicine. A rash can be a symptom of an allergic reaction, and that can be very serious.
- Tell your doctor if you get diarrhea.
- If you are using birth control pills, consult with your healthcare professional because the pill's effectiveness may be reduced when taken with antibiotics.



- Be sure to finish all of the medicine even if you are feeling better.
- Take with plenty of water.

Antibiotics

Penicillin

Examples

amoxicillin/TRIMOX, AMOXIL
ampicillin/PRINCIPEN, OMNIPEN
penicillin V/VEETIDS

Interactions

Food: Take on an empty stomach, but if it upsets your stomach, take it with food.

Quinolones

Examples

ciprofloxacin/CIPRO
levofloxacin/LEVAQUIN
ofloxacin/FLOXIN

Interactions

Food: Take on an empty stomach one hour before or two hours after meals. If your stomach gets upset, take it with food. However, avoid calcium-containing products like milk and yogurt, vitamins or minerals containing iron, and antacids because the drug's concentration decreases significantly.

Caffeine: Using quinolones with caffeine-containing products (*e.g.*, coffee, colas, tea, and chocolate) may increase caffeine levels, leading to excitability and nervousness.

Cephalosporins

Examples

cefaclor/CECLOR, CECLOR CD
cefadroxil/DURICEF
cefixime/SUPRAX
cefprozil/CEFZIL
cephalexin/KEFLEX, KEFTAB

Interactions

Food: Take on an empty stomach one hour before or two hours after meals. If your stomach gets upset, take with food.

Macrolides

Examples

azithromycin/ZITHROMAX
clarithromycin/BIAXIN
erythromycin/E-MYCIN, ERY-TAB, ERYC
erythromycin + sulfisoxazole/PEDIAZOLE

Interactions

Food: Take on an empty stomach one hour before or two hours after meals. If your stomach gets upset, take with food.

Sulfonamides

Example

sulfamethoxazole + trimethoprim/BACTRIM,
SEPTRA

Interactions

Food: Take on an empty stomach one hour before or two hours after meals. If your stomach gets upset, take with food.

Tetracyclines

Examples

doxycycline/VIBRAMYCIN
minocycline/MINOCIN
tetracycline/ACHROMYCIN, SUMYCIN

Interactions

Food: Take on an empty stomach one hour before or two hours after meals. If your stomach gets upset, take with food. However, it is important to avoid taking tetracycline/ACHROMYCIN, SUMYCIN with dairy products (milk, cheese, yogurt, ice cream), antacids, and vitamins containing iron, because these can interfere with the medication's effectiveness.

Nitroimidazole

Example

metronidazole/FLAGYL

Interactions

Alcohol: Avoid drinking alcohol or using medicines that contain alcohol or eating foods prepared with alcohol while you are taking metronidazole and for at least three days after you finish the medicine. Alcohol may cause nausea, abdominal cramps, vomiting, headaches, and flushing.

Antifungals

Examples

fluconazole/DIFLUCAN
griseofulvin/GRIFULVIN
itraconazole/SPORANOX
ketoconazole/NIZORAL
terbinafine/LAMISIL

Interactions

Food: It is important to avoid using these drugs with dairy products (milk, cheeses, yogurt, ice cream), or antacids.

Alcohol: Avoid drinking alcohol, using medicines that contain alcohol, or eating foods prepared with alcohol while you are taking ketoconazole/NIZORAL and for at least three days after you finish the medicine. Alcohol may cause nausea, abdominal cramps, vomiting, headaches and flushing.

Mood Disorders

Depression, panic disorder, and anxiety are a few examples of mood disorders — complex medical conditions with varying degrees of severity. When using these drugs to treat mood disorders it is important to follow your doctor's instructions. Remember to take your dose as directed even if you are feeling better, and do not stop unless you consult your doctor. In some cases it may take several weeks to see an improvement in symptoms.



Monoamine Oxidase Inhibitors (MAOI)

Examples

phenelzine/NARDIL
tranylcypromine/PARNATE

Interactions

MAO Inhibitors have many dietary restrictions, and people using these drugs need to follow the dietary guidelines and physician's instructions very carefully. A rapid, potentially fatal increase in blood pressure can occur if foods or alcoholic beverages containing tyramine are consumed while using MAO Inhibitors.

Alcohol: Do not drink beer, red wine, other alcoholic beverages, non-alcoholic and reduced alcohol-beer, and red-wine products.

Food: Foods high in tyramine that should be avoided include:

- American processed, cheddar, blue, brie, mozzarella, and Parmesan cheese; yogurt, sour cream.
- Beef or chicken liver; cured meats such as sausage and salami; game meat; caviar; dried fish.
- Avocados, bananas, yeast extracts, raisins, sauerkraut, soy sauce, miso soup.
- Broad (fava) beans, ginseng, caffeine-containing products (colas, chocolate, coffee, and tea).

Anti-Anxiety Drugs

Examples

alprazolam/XANAX
diazepam/VALIUM
lorazepam/ATIVAN

Interactions

Alcohol: May impair mental and motor performance (e.g., driving, operating machinery).

Caffeine: May cause excitability, nervousness, and hyperactivity and lessen the anti-anxiety effects of the drugs.

Antidepressant Drugs

Examples

citalopram/CELEXA
fluoxetine/PROZAC
paroxetine/PAXIL
sertraline/ZOLOFT

Interactions

Alcohol: Although alcohol may not significantly interact with these drugs to affect mental or motor skills, people who are depressed should not drink alcohol.

Food: These drugs can be taken with or without food.

Stomach Conditions

Conditions like acid reflux, heartburn, acid indigestion, sour stomach, and gas are very common ailments. The goal of treatment is to relieve pain, promote healing, and prevent the irritation from returning. This is achieved by either reducing the acid the body creates or protecting the stomach from the acid. Lifestyle and dietary habits can play a large role in the symptoms of these conditions. For example, smoking cigarettes and consuming products that contain caffeine may make symptoms return.



Histamine Blockers

Examples

cimetidine/TAGAMET or TAGAMET HB
famotidine/PEPCID or PEPCID AC
nizatadine/AXID OR AXID AR
ranitidine/ZANTAC or ZANTAC 75

Interactions

Alcohol: Avoid alcohol while taking these drugs. Alcohol may irritate the stomach and make it more difficult for the stomach to heal.

Food: Can be taken with or without regard to meals.

Caffeine: Caffeine products (e.g., cola, chocolate, tea, and coffee) may irritate the stomach.

Drug-to-Drug Interactions

Not only can drugs interact with food and alcohol, they can also interact with each other. Some drugs are given together on purpose for an added effect, like codeine and acetaminophen for pain relief. But other



drug-to-drug interactions may be unintended and harmful. Prescription drugs can interact with each other or with over-the-counter (OTC) drugs, such as acetaminophen, aspirin, and cold medicine. Likewise, OTC drugs can interact with each other.

Sometimes the effect of one drug may be increased or decreased. For example, tricyclic antidepressants such as amitriptyline (ELAVIL), or nortriptyline (PAMELOR) can decrease the ability of clonidine (CATAPRES) to lower blood pressure. In other cases, the effects of a drug can increase the risk of serious side effects. For example, some antifungal medications such as itraconazole (SPORANOX) and ketoconazole (NIZORAL) can interfere with the way some cholesterol-lowering medications are broken down by the body. This can increase the risk of a serious side effect.

Doctors can often prescribe other medications to reduce the risk of drug-drug interactions. For example, two cholesterol-lowering drugs — pravastatin (PRAVACHOL) and fluvastatin (LESCOL), are less likely to interact with antifungal medications. Be sure to tell your doctor about all medications — prescription and OTC — that you are taking.

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The information here should not replace the advice from your doctor, pharmacist, or other health care professional. If you have any questions or concerns about your medicines and interactions, talk to your health care professional.



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