

**Table 1: Food and Drug Interactions.**

		<b>Use</b>	<b>Interactions/ Guidelines</b>	<b>Examples<sup>1</sup></b>
<b>ALLERGIES</b>	Antihistamine	To relieve or prevent the symptoms of colds, hay fever and allergies.	<b>FOOD:</b> Take without regard to food. Exception: Fexofenadine/ALLEGRA. Bioavailability decreases if taken with apple, orange, or grapefruit juice. <b>ALCOHOL:</b> Avoid alcohol because it increases the sedative effects of the medications.	Diphenhydramine/ BENADRYL Fexofenadine/ALLEGRA loratadine/CLARITIN Cetirizine/ZYRTEC * do not take with juice
<b>ARTHRITIS and PAIN</b>	Analgesic/ Antipyretic	To treat mild to moderate pain and fever.	<b>FOOD:</b> For rapid relief, take on empty stomach. <b>ALCOHOL:</b> Avoid or limit the use of alcohol because chronic alcohol use can increase the risk of liver damage or stomach bleeding.	Acetaminophen/TYLENOL TEMPRA
	Non-Steroidal Anti- Inflammatory Drugs (NSAIDS)	To reduce, pain, fever and inflammation.	<b>FOOD:</b> Take with food or milk because medications can irritate the stomach. <b>ALCOHOL:</b> Avoid or limit the use of alcohol because chronic alcohol use can increase the risk of liver damage or stomach bleeding.	Aspirin/BAYER, ECOTRIN Ibuprofen/MOTRIN, ADVIL Naproxen/ANAPROX, ALEVE, NAPROSYN
	Corticosteroids	<ul style="list-style-type: none"> <li>• To relieve inflamed areas of the body.</li> <li>• To reduce swelling and itching.</li> <li>• To help relieve allergies, rheumatoid arthritis, and other conditions.</li> </ul>	<b>FOOD:</b> Take with food or milk to decrease stomach upset.	Methyprednisolon/ MEDROL Prednisone/DELTASONE Prednisolone/PEDIAPRED, PRELONE Cortisone acetate/CORTEF
	Narcotic Analgesic	To provide relief for moderate to severe pain.	<b>ALCOHOL:</b> Avoid alcohol because it increases the sedative effects of the medication.	Codeine combined with acetaminophen/TYLENOL Morphine/ROXANOL, MS CONTIN
<b>ASTHMA</b>	Bronchodilators	To treat the symptoms of bronchial asthma, chronic bronchitis and emphysema.	<b>FOOD:</b> High-fat meals may increase the amount of theophylline in the body, while high-carbohydrate meals may	Theophylline/SLO-BID, THEO-DUR, UNIPHYL Albuterol/VENTOLIN, PROVENTIL, COMBIVENT Epinephrine/PRIMATENE

			<p>decrease it. It is important to check with the pharmacist about which form you are taking because food can have different effects depending on the dose form.</p> <p><b>CAFFEINE:</b> Avoid eating or drinking large amounts of foods and beverages that contain caffeine.</p> <p><b>ALCOHOL:</b> Avoid alcohol because it can increase the risk of side effects such as nausea, vomiting, headache and irritability.</p>	MIST
<b>CARDIO-VASCULAR DISORDERS</b>	Diuretics	To help eliminate water, sodium and chloride from the body.	<p><b>FOOD:</b> Take on an empty stomach or with milk to decrease stomach upset. Some diuretics cause loss of potassium, calcium and magnesium. Triamterene is known as a “potassium sparing” diuretic. When taking triamterene avoid eating large amounts of potassium-rich foods such as bananas, oranges and green leafy vegetables or salt substitutes.</p>	Furosemide/LASIX Triamterene/ hydrochlorothiazide/ DYAZIDE, MAXZIDE Hydrochlorothiazide/ HYDRODIURIL Trimterene/DRYENIUM Bumetamide/BUMEX Metolazone/ZAROXOLYN
	Beta Blockers	To decrease the nerve impulses to blood vessels.	<p><b>FOOD:</b> Take with food to increase bioavailability. Take atenolol/TENORMIN separately from orange juice. Avoid licorice.</p> <p><b>ALCOHOL:</b> Avoid drinking alcohol with propranolol/INDERAL because these drugs lower blood pressure too much.</p>	Atenolol/TENORMIN Metoprolol/LOPRESSOR Propranolol/INDERAL Nadolol/CORGARD
	Nitrates	To relax blood vessels and lower the demand for oxygen by the heart.	<p><b>FOOD:</b> Take on an empty stomach.</p> <p><b>ALCOHOL:</b> Avoid alcohol because it may add to the blood vessel-relaxing effect of nitrates and result in dangerously low blood pressure.</p>	Isosorbide dinitrate/ ISORDIL, SORBITATE Nitroglycerin/NITRO, NITRODUR, TRANSDERM-NITRO
	Angiotension	To relax blood	<b>FOOD:</b> Take	Captopril/CAPOTEN

	Converting Enzyme (ACE Inhibitors)	vessels by preventing angiotension II, a vasoconstrictor, from being formed.	catropil/CAPOTEN or moexipril/UNIVASC on empty stomach. High fat meals decrease absorption of quinapril/ACCUPRIL. Take others without regard to food. Ensure adequate fluid intake. Avoid salt substitutes.	Enalapril/VASOTEC Lisinopril/PRINIVIL, ZESTRIL Quinapril/ACCUPRIL Moexipril/UNIVASC
	HMG-CoA Reductase Inhibitors	Known as “statins” • To lower cholesterol. • To reduce the production rate of LDL (bad) cholesterol.	<b>FOOD:</b> Avoid grapefruit/related citrus with atorvastatin/LIPITOR, lovastatin/MEVACOR, and simvastatin/ ZOCOR. Lovastatin/MEVACOR should be taken with the evening meal to enhance absorption.  <b>ALCOHOL:</b> Avoid drinking large amounts of alcohol because it may increase the risk of liver damage.	Atorvastatin/LIPITOR Cerivastatin/BAYCOL Fluvastatin/LESCOL Lovastatin/MEVACOR Pravastatin/PRAVACHOL Simvastatin/ZOCOR
	Anticoagulants	To prevent the formation of blood clots.	<b>FOOD:</b> Vitamin K produces blood-clotting substances and may reduce the effectiveness of anticoagulants. Limit foods high in Vitamin K such as broccoli, spinach, kale, turnip greens, cauliflower, and br ussel sprouts. High doses of vitamin E (400 IU or more) may prolong clotting time and increase the risk of bleeding.	Warfrin/COUMADIN
<b>INFECTIONS</b>	Antibiotics and Antifungals	To treat infections caused by bacteria and fungi.	<b>GENERAL GUIDELINES:</b> Tell the doctor if you experience skin rashes or diarrhea. If you are using birth control, consult with your health care provider because some methods may not work when taken with antibiotics. Be sure to finish all of your medication even if you start feeling better. Take	

		medication with plenty of water.	
Antibacterials/ Penicillin	To treat infections caused by bacteria and fungi.	<b>FOOD:</b> Take on an empty stomach unless it upsets your stomach, then take with food.	Penicillin V/VEETIDS Amoxicillin/TRIMOX, AMOXIL Ampicillin/PRINCIPEN, OMNIPEN
Quinolones	To treat infections caused by bacteria and fungi.	<b>FOOD:</b> Take on empty stomach one hour before or two hours after meals. If your stomach gets upset, take with food, but not with dairy or calcium-fortified products alone. <b>CAFFEINE:</b> Taking these medications with caffeine-containing products may increase caffeine levels, leading to excitability and nervousness.	Ciprofloxacin/CIPRO Levofloxacin/LEVAQUIN Ofloxacin/FLOXIN Trovafloracin/TROVAN
Cephalosporins	To treat infections caused by bacteria and fungi.	<b>FOOD:</b> Take on an empty stomach one hour before or two hours after meals. If your stomach gets upset, take with food.	Cefaclor/CECLOR CECLOR CD Cefradroxil/DURICEF Cefixime/SUPRAX Cefprozil/CEFZIL Cephalexin/KEFLEX, KEFTAB
Macrolides	To treat infections caused by bacteria and fungi.	<b>FOOD:</b> May take with food if GI distress occurs. Avoid taking with citrus foods, citrus juices, and carbonated drinks.	Azithromycin/ZITHROMAX Clarithromycin/BIAXIN ERYTHROMYCIN/E-MYCIN, ERY-TAB, ERYCErythromycin + sulfisoxazole/PEDIAZOLE
Sulfonamides	To treat infections caused by bacteria and fungi.	<b>FOOD:</b> Take with food and at least 8 ounces of water.	Sulfamethoxazole + trimethoprim/BACTRIM, SEPTRA
Tetracyclines	To treat infections caused by bacteria and fungi.	<b>FOOD:</b> Take on an empty stomach with 8 ounces of water. Avoid taking tetracycline with dairy products, antacids, and vitamin supplements containing iron because they can interfere with the medication's effectiveness.	Tetracycline/ ACHROMYCIN, SUMYCIN Doxycycline/VIBRMYCIN Minocycline/MINOCIN
Nitromidazole	To treat infections caused by bacteria and fungi.	<b>FOOD:</b> May take with food to decrease GI distress, but food decreases bioavailability. <b>ALCOHOL:</b> Avoid drinking alcohol and	Metronidazole/FLAGYL

			<p>taking medications that contain alcohol while taking metronidazole and for at least three days after you finish the medication. Alcohol may cause nausea, abdominal cramps, vomiting, headaches, and flushing.</p>	
	Antifungals		<p><b>FOOD:</b> Take with food to increase absorption. Do not take itraconazole/SPORANOX with grapefruit/related citrus.</p> <p><b>ALCOHOL:</b> Avoid drinking alcohol and taking medications that contain alcohol while taking ketoconazole and for at least three days after you finish the medication. Alcohol may cause nausea, abdominal cramps, vomiting, headaches, and flushing.</p>	<p>Fluconazole/DIFLUCAN Griseofulvin/GRIFULVIN Ketoconazole/NIZORAL Itraconazole/SPORANOX</p>
<b>MOOD DISORDERS</b>	Monoamine Oxidase (MAO) Inhibitors	To treat depression, emotional and anxiety disorders.	<p><b>FOOD:</b> These medications have many dietary restrictions and people taking them need to follow the dietary guidelines and physician's instructions very carefully.</p> <p>A rapid, potentially fatal increase in blood pressure can occur if foods or alcoholic beverages containing tyramine are consumed while taking MAO inhibitors. Avoid foods high in tyramine and other pressor amines during drug use and for two weeks after discontinuation. These include aged cheeses, aged meats, soy sauce, tofu, miso, fava beans, snowpeas, sauerkraut, avocados, bananas, yeast extracts, raisins, ginseng, licorice, and caffeine.</p> <p><b>ALCOHOL:</b> Do not drink beer, red wine, other</p>	<p>Phenelsine/NARDIL Tranycypromine/PARNATE</p>

			alcoholic beverages, non-alcoholic and reduced alcohol beer and red-wine products.	
	Anti-Anxiety Drugs	To treat depression, emotional and anxiety disorders.	<b>FOOD:</b> May take with food if GI distress occurs. <b>CAFFEINE:</b> May cause excitability, nervousness and hyperactivity and lessen the anti-anxiety effects of the drugs. <b>ALCOHOL:</b> May impair mental and motor performance.	Lorasepan/ATIVAN Diazepam/VALIUM Alprazolam/XANAX
	Antidepressant Drugs	To treat depression, emotional and anxiety disorders.	<b>FOOD:</b> These medications can be taken with or without food. <b>ALCOHOL:</b> Avoid alcohol.	Paroxetine/PAXIL Sertraline/ZOLOFT Fluoxetine/PROZAC
<b>STOMACH CONDITIONS</b>	Histamine Blockers	To relieve pain, promote healing and prevent irritation from returning.	<b>FOOD:</b> These medications can be taken with or without food. <b>CAFFEINE:</b> Caffeine products may irritate the stomach. <b>ALCOHOL:</b> Avoid alcohol while taking these products. Alcohol may irritate the stomach and make it more difficult for the stomach to heal.	Cimetidine/TAGAMET Famotidine/PEPCID Ranitidine/ZANTAC Nizatadine/AXID

<sup>1</sup>The generic name for each drug is stated first. Brand names are in all capital letters and represent only some examples of those medications.

References: Food and Drug Interactions, 1998, U.S. Food and Drug Administration, National Consumers League.

**Table 2: Aspirin vs. Acetaminophen vs. Ibuprofen**

	<b>Aspirin</b>	<b>Acetaminophen</b>	<b>Ibuprofen</b>
<b>Classification</b>	NSAID, ANALGESIC, ANTIPYRETIC, ANTIARTHRITIC	ANALGESIC, ANTIPYRETIC	NSAID, ANALGESIC, ANTIARTHRITIC
<b>Use</b>	<ul style="list-style-type: none"> <li>• pain relief and fever reduction in adults-relieves mild itching</li> <li>• reduces swelling and inflammation</li> <li>• used to treat arthritis, many other conditions and injuries</li> <li>• used to reduce risk of heart attack and stroke</li> </ul>	<ul style="list-style-type: none"> <li>• mild pain relief</li> <li>• reduces fever</li> </ul>	<ul style="list-style-type: none"> <li>• pain relief</li> <li>• reduces fever</li> <li>• reduces inflammation</li> </ul>
<b>Cautions</b>	Caution is advised if you: <ul style="list-style-type: none"> <li>• get stomach irritation when</li> </ul>	<ul style="list-style-type: none"> <li>• High doses or regular, long-term use can cause</li> </ul>	Caution is advised if you have: <ul style="list-style-type: none"> <li>• asthma and nasal polyps</li> </ul>

	<p>taking aspirin-or are allergic to aspirin</p> <ul style="list-style-type: none"> <li>• are taking blood thinning medication</li> <li>• have a hang-over</li> </ul> <p>A person should not take aspirin if he/she has: ulcers, gout, asthma, hearing loss.</p>	<p>liver damage, especially if used with alcohol.</p> <ul style="list-style-type: none"> <li>• Should not be used to treat fever over 103.1° F for more than three days.</li> <li>• Should not be used to treat fevers that keep coming back.</li> <li>• Should not be used on a regular basis by people who suffer from: anemia or liver or kidney disease</li> </ul>	<ul style="list-style-type: none"> <li>• a stomach or intestinal disorder</li> <li>• a skin condition called “angioedema”</li> <li>• an allergic reaction to other antiinflammatory medications</li> <li>• liver or kidney disease</li> <li>• a blood clotting disorder</li> <li>• heart failure</li> <li>• Not to be used with aspirin, alcohol or steroids.</li> <li>• HT hypertension</li> </ul>
<b>Dietary Recommendations</b>	<ul style="list-style-type: none"> <li>• Insure adequate fluid intake/hydration</li> <li>• Increase foods high in vitamin C and folic acid with long-term, high dosage use</li> <li>• Avoid or limit garlic, ginger and Gingko, or horse chestnut</li> <li>• Limit caffeine</li> <li>• Avoid alcohol</li> </ul>	<ul style="list-style-type: none"> <li>• Avoid alcohol or limit to less than 3 drinks per day.</li> </ul>	<ul style="list-style-type: none"> <li>• Take with meals or milk.</li> <li>• Avoid or limit garlic, ginko, or horse chestnut.</li> <li>• Limit caffeine.</li> <li>• Avoid alcohol.</li> </ul>
<b>Remarks</b>	<p>Children and teenagers should not take aspirin because it is associated with a rare disorder called Reye’s Syndrome in these age groups.</p>	<p>Works will for people who can’t take aspirin because of aspirin-related allergic reactions, stomach irritation, or ringing in the ears.</p>	<ul style="list-style-type: none"> <li>• Less irritating to the stomach than aspirin for some.</li> <li>• Does not cause ringing in the ears like aspirin.</li> <li>• Does not cause liver damage like acetaminophen.</li> </ul>
<b>Known Brands</b>	<p>Aspirin, Ascriptin, Bufferin, Ecotrin</p>	<p>Aspirin Free Anacin, Aspirin Free Excedrin, Tylenol, Panadol, Temptra.</p>	<p>Advil, Midol IB, Motrin</p>

Pregnant women should consult a doctor prior to taking any over-the-counter medication. Other people, including persons with medical conditions, are advised to read product labels carefully and consult a pharmacist if they have any questions about proper use.

Medical Center of the Rockies. Food & Drug Interactions. 2008

Pronsky, Zm. Food Medication Interactions. 15th Edition. Birchrunville, Pa: 2008

U.S. Food & Drug Administration. National Consumers League. Food & Drug Interactions. 1998.

<sup>1</sup>J. Anderson, Colorado State University Extension foods and nutrition specialist and professor; and H. Hart, associate specialist; food science and human nutrition. 12/96. Revised 12/08.