Prepared for: Mr John Q. Patient

Medications currently taken: **Amiodarone Oral**
Lipitor
Coumadin
Aspirin

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The following report has been created especially for you to help you manage your health.

We have included the following*:

- An overview of CardioVascular Disease
- Healthy Lifestyle Tips
- Eating Healthy
- Top Supplements for this condition
- Drug reactions you need to be aware
- Drug-Drug Interactions with other drugs you are taking
- Drug food interactions
- Drug vitamin-herb interaction
- Drug Depletions
- Drug Precautions
- Drug Side Effects
- Monographs for you doctor regarding drug interactions

Paragraph regarding the role your specialty (Chiropractic, Metabolic Typing®, Functional Diagnostic Nutrition) plays in their overall health. Include your recommendations for diet, exercise, lifestyle and Wellness.

Give them your schedule for classes and events at your office to help them manage their heal.

We are dedicated to being your source of everything health

*Please note this document is filled with clickable links for even more information for you.

What You Need To Know

Cardiovascular Disease Overview

Also indexed as: Heart Disease

- Need to Know
- About
- Eating Right

Related Topics

1. Angina
2. Atherosclerosis
3. Low-Salt Recipes
4. 8 Secrets for Becoming Smoke-Free
5. Top Supplements for Heart Health

A heart-to-heart on cardiovascular disease: Make simple changes to help you beat the odds against heart disease, a leading cause of death.

- **Get smoke-free** Quit smoking and stay clear of cigarette smoke to lower your risk of several types of cardiovascular disease
- **Watch what you eat**Eat lots of fruits, vegetables, legumes, whole grains, fish, and avoid fats from meat, dairy, and processed foods high in hydrogenated oils
- **Stay active** Couch potatoes have increased cardiovascular disease risk, so make sure you get regular exercise
- **Get tested** See your doctor to find out if you have problems with high blood pressure or high blood levels of cholesterol, triglycerides, or glucose
- **Talk to your doctor** Explore the different medications available to treat the signs and symptoms of cardiovascular disease

About This Condition

Cardiovascular disease is a wide-encompassing category that includes all conditions that affect the heart and the blood vessels.

Cardiovascular disease is the number one cause of death in the United States. This introductory article briefly discusses several diseases that have a role in the development of cardiovascular disease. Many risk factors are associated with cardiovascular disease; most can be managed, but some cannot. The aging process and hereditary predisposition are risk factors that cannot be altered. Until age 50, men are at greater risk than women of developing heart disease, though once a woman enters menopause, her risk triples.[1]

Many people with cardiovascular disease have elevated or high cholesterol levels.[2] Low HDL cholesterol (known as the "good" cholesterol) and high LDL cholesterol (known as the "bad" cholesterol) are more specifically linked to cardiovascular disease than is total cholesterol.[3] A blood test, administered by most healthcare professionals, is used to determine cholesterol levels.

Atherosclerosis (hardening of the arteries) of the vessels that supply the heart with blood is the most common cause of heart attacks. Atherosclerosis and high cholesterol usually occur together, though cholesterol levels can change quickly and atherosclerosis generally takes decades to develop.

The link between high triglyceride levels and heart disease is not as well established as the link between high cholesterol and heart disease. According to some studies, a high triglyceride level is an independent risk factor for heart disease in some people.[4]

High homocysteine levels have been identified as an independent risk factor for heart disease.[5] Homocysteine can be measured by a blood test that must be ordered by a healthcare professional.

Hypertension (high blood pressure) is a major risk factor for cardiovascular disease, and the risk increases as blood pressure rises.[6] Glucose intolerance and diabetes constitute separate risk factors for heart disease. Smoking increases the risk of heart disease caused by hypertension.

Abdominal fat, or a "beer belly," versus fat that accumulates on the hips, is associated with increased risk of cardiovascular disease and heart attack.[7]Overweight individuals are more likely to have additional risk factors related to heart disease, specifically hypertension, high blood sugar levels, high cholesterol, high triglycerides, and diabetes.

Symptoms

People with cardiovascular disease may not have any symptoms, or they may experience difficulty in breathing during exertion or when lying down, fatigue, lightheadedness, dizziness, fainting, depression, memory problems, confusion, frequent waking during sleep, chest pain, an awareness of the heartbeat, sensations of fluttering or pounding in the chest, swelling around the ankles, or a large abdomen.

Healthy Lifestyle Tips

Both smoking[8] and exposure to secondhand smoke[9] increase cardiovascular disease risk.

Moderate exercise protects both lean and obese individuals from cardiovascular disease.[10]

Recommendation Why Get started Eat healthfully Eat lots of fruits, vegetables, legumes, whole grains, fish, and avoid fats from meat, dairy, and processed foods high in hydrogenated oils Learn More

Eat healthfully

A high intake of carotenoids from dietary sources has been shown to be protective against heart disease in several population-based studies.[11, 12] A diet high in fruits and vegetables,[13] fiber,[14] and possibly fish[15] appears protective against heart disease, while a high intake of saturated fat (found in meat and dairy fat) and trans fatty acids (in margarine and processed foods containing hydrogenated vegetable oils)[16] may contribute to heart disease. In a preliminary study, the total number of deaths from cardiovascular disease was significantly lower among men with high fruit consumption[17] than among those with low fruit consumption. A large study of male healthcare professionals found that those men eating mostly a "prudent" diet (high in fruits, vegetables, legumes, whole grains, fish, and poultry) had a 30% *lower* risk of heart attacks compared with men who ate the fewest foods in the "prudent" category.[18] By contrast, men who ate the highest percentage of their foods from the "typical American diet" category (high in red meat, processed meat, refined grains, sweets, and desserts) had a 64% *increased* risk of heart attack, compared with men who ate the fewest foods in that category. The various risks in this study were derived after controlling for all other beneficial or harmful influencing factors.

A parallel study of female healthcare professionals showed a 15% reduction in cardiovascular risk for those women eating a diet high in fruits and vegetables—compared with those eating a diet low in fruits and vegetables.[19]

Limit salt

Preliminary evidence has linked high salt consumption with increased cardiovascular disease incidence and death among overweight, but not normal weight, people. Among overweight people, an increase in salt consumption of 2.3 grams per day was associated with a 32% increase in stroke incidence, an 89% increase in stroke mortality, a 44% increase in heart disease mortality, a 61% increase in cardiovascular disease mortality, and a 39% increase in death from all causes.[20]

Top Supplements for Heart Health

Love your heart—Learn about vitamins that can help you manage your heart disease risk.

Select a topic:

- Coenzyme Q10
- Eat Whole Grains for Heart Health
- Fish Oil
- Folic Acid
- Garlic
- L-carnitine
- Magnesium
- Soy

- Taurine
- Vitamin A
- Vitamin C
- Vitamin E

Atherosclerosis

Also indexed as: Arterial Disease, Coronary Artery Disease, Coronary Heart Disease, Hardening of the Arteries, Plaque (Arterial)

- Need to Know
- About
- Eating Right
- Supplements

Related Topics

1. Find Great Recipe Ideas
2. Find Drug Interaction Information
3. Look Up Healthy Food Ideas

About This Condition

Atherosclerosis is hardening of the arteries, a common disease of the major blood vessels characterized by fatty streaks along the vessel walls and by deposits of cholesterol and calcium.

Atherosclerosis of arteries supplying the heart is called coronary artery disease. It can restrict the flow of blood to the heart, which often triggers heart attacks—the leading cause of death in Americans and Europeans. Atherosclerosis of arteries supplying the legs causes a condition called intermittent claudication, which is characterized by pain in the legs after walking short distances.

People with elevated cholesterol levels are much more likely to have atherosclerosis than people with low cholesterol levels. Many important nutritional approaches to protecting against atherosclerosis are aimed at lowering serum cholesterol levels.

People with diabetes are also at very high risk for atherosclerosis, as are people with elevated triglycerides and high homocysteine.

Symptoms

Atherosclerosis is typically a silent disease until one of the many late-stage vascular manifestations intervenes. Some people with atherosclerosis may experience angina (chest pain) or intermittent claudication (leg cramps and pain) on exertion. Symptoms such as these develop gradually as the disease progresses.

Healthy Lifestyle Tips

Virtually all doctors acknowledge the abundant evidence that smoking is directly linked to atherosclerosis and heart disease.[1]Quitting smoking protects many people from atherosclerosis and heart disease, and is a critical step in the process of disease prevention.[2, 3]

Obesity,[4] type A behavior (time conscious, impatient, and aggressive), stress,[5] and sedentary lifestyle[6] are all associated with an increased risk of atherosclerosis; interventions designed to change these risk factors are linked to protection from this condition.[7]

Aggressive verbal or physical responses when angry have been consistently related to coronary atherosclerosis in numerous studies.[8, 9, 10] A low level of social support, especially when combined with a high level of outwardly expressed anger has also been associated with accelerated progression of coronary atherosclerosis.[11]

Recommendation Why Get started Choose omega-6-rich foods
Eating omega-6 fatty acids, found in corn, safflower, grapeseed, and sunflower oils, and in foods such as nuts and seeds, appears to protect against atherosclerosis and is associated with reduced heart disease risk.

Learn More

Eat a high-fiber diet Eating foods high in fiber, especially oats, psyllium seeds, fruit, and beans, may lower cholesterol and reduce the risk of coronary heart disease.
Learn More
Get Recipes

Eat more complex carbs Choose whole grains whenever possible as a diet high in refined carbs, such as white flour, white rice, and simple sugars, appears to increase the risk of coronary heart disease, especially in overweight women.
Learn More

Go vegetarian A pure vegetarian diet (no meat, poultry, dairy or eggs), combined with exercise and stress reduction, has been shown to decrease atherosclerosis.
Learn More
Get Recipes

Skip the salt Eating low or moderate amounts of salt may help reduce your risk of heart disease.
Learn More
Get Recipes

Try a low-fat diet The most important dietary changes in protecting arteries from atherosclerosis include choosing alternatives to meat and dairy, and eating foods without trans fats.
Learn More
Get Recipes

Try ALA People who eat diets high in alpha-linolenic acid—found in canola oil and flaxseed products—have high blood levels of omega-3 fatty acids, which may protect against atherosclerosis.
Learn More

Supplement Amount Why Garlic 900 mg daily of a powder standardized for 0.6% allicin [3 stars] Garlic has been shown to slow down the process of the arteries hardening. Aged garlic extract has been shown to prevent oxidation of LDL ("bad") cholesterol, a significant factor in atherosclerosis development.
Learn More

Omega-6 Fatty Acids Follow label instructions [3 stars] Though the effect has not been studied with supplements, an analysis of several controlled trials found that replacing saturated fats in the diet with omega-6 fats reduces the risk of coronary heart disease.
Learn More

Fish Oil 3 to 6 grams fish oil daily, containing at least 30% omega-3 fatty acids [2 stars] Fish oil may reduce risk factors for atherosclerosis and heart disease. One trial showed that people who took fish oil had a slowing of the progression of their arterial plaque and had a decrease in cardiovascular events such as heart attack and stroke.
Learn More

Folic Acid Consult a qualified healthcare practitioner [2 stars] Blood levels of an amino acid called homocysteine have been linked to atherosclerosis and heart disease in most research. Taking folic acid may help lower homocysteine levels.
Learn More

Horny Goat Weed 5 grams three times per day [2 stars] Horny goat weed has historically been used in people with symptoms caused by hardening of the arteries, in particular those recovering from strokes.
Learn More

Niacin (Vitamin B3)
2,000 mg per day (only under a doctor's supervision)

[2 stars] In a preliminary trial, doctor-supervised supplementation with extended-release niacin in combination with a cholesterol-lowering statin drug appeared to reverse atherosclerosis of the carotid arteries (the arteries that supply blood to the brain).
Learn More

Selenium 100 mcg daily [2 stars] Some doctors recommend that people with atherosclerosis supplement with selenium, which has been shown in one study to help reduce the risk of death from heart disease.
Learn More

Tocotrienols 200 mg daily [2 stars] Tocotrienols are potent antioxidants that may help slow down the build-up of plaque in the arteries.
Learn More

Vitamin C 250 mg twice per day [2 stars] Supplementing with vitamin C may help reverse the progression of atherosclerosis and protect against heart disease.
Learn More

Vitamin K
(Vitamin K1, for coronary calcification) 500 mcg per day of vitamin K1 [2 stars]
In a double-blind trial, supplementing with vitamin K1 for three years appeared to slow the rate of progression of coronary artery calcification in seniors.

Learn More

Betaine (Trimethylglycine) Refer to label instructions [1 star] For the few cases in which vitamin B6, vitamin B12, and folic acid fail to normalize homocysteine, adding betaine (trimethylglycine) may be effective.
Learn More

Bilberry Refer to label instructions [1 star] Bilberry has been shown to prevent platelet aggregation.
Learn More

Butcher's Broom Refer to label instructions [1 star] Butcher's broom exerts effects that protect arteries.
Learn More

Chondroitin Sulfate Refer to label instructions [1 star] Preliminary research shows that chondroitin sulfate may prevent atherosclerosis and may also prevent heart attacks in people who already have atherosclerosis.
Learn More

Evening Primrose Oil Refer to label instructions [1 star] Taking evening primrose oil has been shown to lower cholesterol in double-blind research. Lowering cholesterol levels should in turn reduce the risk of atherosclerosis.
Learn More

Ginger Refer to label instructions [1 star] Supplementing with ginger may reduce platelet stickiness.
Learn More

Ginkgo Refer to label instructions [1 star] The herb *Ginkgo biloba* may reduce atherosclerosis risk by stopping platelets from sticking together too much. It also increases blood circulation to the brain, arms, and legs.
Learn More

Lycopene Refer to label instructions [1 star] The carotenoid lycopene, present in high amounts in tomatoes, may help prevent atherosclerosis.
Learn More

Peony Refer to label instructions [1 star] Peony has been shown to prevent platelet aggregation.
Learn More

Quercetin Refer to label instructions [1 star] Quercetin, a flavonoid, protects LDL cholesterol from damage.
Learn More

Resveratrol Refer to label instructions [1 star] Studies have found that red wine, which contains resveratrol, lowers risk of death from heart disease. Its antioxidant activity and effect on platelets leads some researchers believe that it is the protective agent in red wine.
Learn More

Rosemary Refer to label instructions [1 star] Rosemary is traditionally reputed to have a positive effect on atherosclerosis.
Learn More

Shelled Hemp Seed Refer to label instructions [1 star] Shelled hemp seed or its oil may theoretically be useful for people with atherosclerosis due to its essential fatty acid content.
Learn More

Turmeric Refer to label instructions [1 star] Turmeric's active compound curcumin has shown potent anti-platelet activity in preliminary studies.
Learn More

Vitamin B12 Refer to label instructions [1 star] Blood levels of the amino acid homocysteine have been linked to atherosclerosis and heart disease in most research. Taking vitamin B12 may help lower homocysteine levels.
Learn More

Vitamin B6 Refer to label instructions [1 star] Blood levels of the amino acid homocysteine have been linked to atherosclerosis and heart disease in most research. Taking vitamin B6 may help lower homocysteine levels.
Learn More

Vitamin E 100 to 200 IU daily [1 star] Vitamin E is an antioxidant that protects LDL cholesterol from oxidative damage and has been linked to heart disease prevention. Many doctors recommend supplementing with vitamin E to lower the risk of atherosclerosis and heart attacks.
Learn More

Drug Interactions | Duplicate Therapy Warnings

Click the links below to learn more about each interaction listed.

Drug-Drug Interactions

Severe
AMIODARONE HCL 400MG TABLET and COUMADIN 5MG TABLET may interact based on the potential interaction between AMIODARONE and ANTICOAGULANTS.
ASPIRIN CHILD 81MG TAB CHEW and COUMADIN 5MG TABLET may interact based on the potential interaction between ANTICOAGULANTS and SALICYLATES.

Drug-Food Interactions

More Significant
AMIODARONE HCL 400MG TABLET may interact with food in that GRAPEFRUIT MAY INCREASE SERUM DRUG CONC. AVOID GRAPEFRUIT UNLESS MD INSTRUCTS OTHERWISE..
COUMADIN 5MG TABLET may interact with food in that FOOD HIGH IN VITAMIN K MAY DECREASE EFFECT. AVOID FOODS HIGH IN VITAMIN K..
LIPITOR 40MG TABLET may interact with food in that GRAPEFRUIT MAY INCREASE SERUM DRUG CONC. AVOID GRAPEFRUIT UNLESS MD INSTRUCTS OTHERWISE..

For your Doctor

Drug-Drug Interaction Monograph (consumer version)

AMIODARONE HCL 400MG TABLET and COUMADIN 5MG TABLET
This information is generalized and not intended as specific medical advice. Consult your healthcare professional before taking or discontinuing any drug or commencing any course of treatment.

MONOGRAPH TITLE: **Amiodarone/Anticoagulants**

MEDICAL WARNING: Serious. These medicines may interact and cause very harmful effects. Contact your healthcare professional (e.g. doctor or pharmacist) for more information.

HOW THE INTERACTION OCCURS: The cause of the interaction is not known. When these two medicines are taken together, amiodarone may prevent your body from processing your anticoagulant properly.

WHAT MIGHT HAPPEN: You may experience an increased chance for bleeding, including bleeding from your gums, nosebleeds, unusual bruising, or dark stools.

WHAT YOU SHOULD DO ABOUT THIS INTERACTION: Contact your healthcare professionals (e.g. doctor or pharmacist) as soon as possible about taking these two medicines together. They may already be aware of this interaction and may be monitoring you for it. If your doctor prescribes these medicines together, you may need to check your bleeding times more often. Do not start, stop, or change the dosage of any medicine before checking with them first.

Drug-Drug Interaction Monograph (consumer version)

ASPIRIN CHILD 81MG TAB CHEW and COUMADIN 5MG TABLET
This information is generalized and not intended as specific medical advice. Consult your healthcare professional before taking or discontinuing any drug or commencing any course of treatment.

MONOGRAPH TITLE: **Anticoagulants/Salicylates**

MEDICAL WARNING: Serious. These medicines may interact and cause very harmful effects. Contact your healthcare professional (e.g. doctor or pharmacist) for more information.

HOW THE INTERACTION OCCURS: When these two medicines are taken together, aspirin may decrease the ability of your blood to clot properly.

WHAT MIGHT HAPPEN: You may experience an increased chance for bleeding including bleeding from your gums, nosebleeds, unusual bruising, or dark stools.

WHAT YOU SHOULD DO ABOUT THIS INTERACTION: Ask your healthcare professionals (e.g. doctor or pharmacist) about taking these medicines together. They may recommend a non-aspirin product. If your doctor prescribes these medicines together, you may need to have your bleeding times checked more often. If you have any signs of bleeding, such as bleeding from your gums, nosebleeds, unusual bruising, or dark stools, contact your doctor right away. Your healthcare professionals may already be aware of this interaction and may be monitoring you for it. Do not start, stop, or change the dosage of any medicine before checking with them first.

Drug-Food Interaction Monograph
(consumer version)

AMIODARONE HCL 400MG TABLET may interact with food

This information is generalized and not intended as specific medical advice. Consult your healthcare professional before taking or discontinuing any drug, changing your diet or commencing any course of treatment.

MONOGRAPH TITLE: Amiodarone/Grapefruit juice interaction

MEDICAL WARNING: Very Important. A change in your diet, medicine or dosage may be necessary. Promptly consult your doctor or pharmacist.

HOW THE INTERACTION OCCURS: Amiodarone is processed by enzymes in your intestine to its active form. Grapefruit juice contains compounds that slow down this process.

POSSIBLE EFFECTS: Your amiodarone might not be able to control problems associated with your heart rate and rhythm.

WHAT YOU SHOULD DO ABOUT THIS INTERACTION: While you are taking this medicine, you should not eat grapefruit or drink grapefruit juice at any time. You may choose an alternative citrus beverage (such as orange juice). In the event that you are instructed by a healthcare professional (e.g., doctor, pharmacist, or dietitian) to eat grapefruit or drink grapefruit juice, you should immediately discuss with doctor the effects of grapefruit on the blood levels of this medicine. Your healthcare professionals may be aware of this interaction and may be monitoring you for it. Do not start, stop, or change your medicine or diet before checking with them first.

Drug-Food Interaction Monograph
(consumer version)

LIPITOR 40MG TABLET may interact with food

This information is generalized and not intended as specific medical advice. Consult your healthcare professional before taking or discontinuing any drug, changing your diet or commencing any course of treatment.

MONOGRAPH TITLE: Selected HMG-CoA Reductase inhibitors/grapefruit

MEDICAL WARNING: Very important. A change in your diet, medicine, or dosage may be necessary. Promptly consult your doctor or pharmacist.

HOW THE INTERACTION OCCURS: When grapefruit or grapefruit juice is taken with this "statin"-type cholesterol-lowering medicine, it may increase the amount of this medicine absorbed into your bloodstream.

WHAT MIGHT HAPPEN: The level of this medicine in your blood may increase. This may increase the risk of developing serious muscle disorders.

WHAT YOU SHOULD DO ABOUT THIS INTERACTION: While you are taking this medicine, do not eat grapefruit or drink grapefruit juice at any time. You may choose an alternative citrus beverage (such as orange juice). In the event that you are instructed by a healthcare professional (e.g., doctor, pharmacist, or dietitian) to eat grapefruit or drink grapefruit juice, you should immediately discuss with your doctor the effects of grapefruit on the blood levels of this medicine. Tell your doctor immediately if you develop muscle aches and pains or an unusual change in your amount of urine. Contact your healthcare professional (e.g., doctor or pharmacist) for more information. Your healthcare professionals may be aware of this interaction and may be monitoring you for it. Do not start, stop, or change your medicine or diet before checking with them first.

Drug-Food Interaction Monograph (consumer version)

COUMADIN 5MG TABLET may interact with food

This information is generalized and not intended as specific medical advice. Consult your healthcare professional before taking or discontinuing any drug, changing your diet or commencing any course of treatment.

MONOGRAPH TITLE: Warfarin/Vitamin K-containing foods

MEDICAL WARNING: Very important. A change in your diet, medicine, or dosage may be necessary. Promptly consult your doctor or pharmacist.

HOW THE INTERACTION OCCURS: When warfarin is taken with foods containing vitamin K, the vitamin K may prevent warfarin from effectively treating blood clots.

WHAT MIGHT HAPPEN: The beneficial effects of warfarin may decrease.

WHAT YOU SHOULD DO ABOUT THIS INTERACTION: Avoid sudden changes in your diet while you are taking this medicine. Foods high in Vitamin K are of the most concern, but the best approach is to try to be consistent in your daily food choices. Do not change the amount of moderate-to-high Vitamin K-containing food in your diet (see the lists below) without first consulting

your healthcare professional (e.g., doctor or pharmacist). Also, do not use a strict vegetarian diet (some greens have moderate-to- high Vitamin K content) without first consulting your healthcare professional. Some examples of foods high or moderate in Vitamin K content are listed below: High Level Vitamin K Foods (micrograms per serving listed) include Kale, fresh (547.4 micrograms per 1 cup); Swiss Chard, fresh (298.8 micrograms per 1 cup); Broccoli, frozen, boiled (248.4 micrograms per 1/2 cup); Broccoli, fresh, boiled (210.6 micrograms per 1/2 cup); Spinach, fresh (120 micrograms per 1 cup); Green or Red Leaf Lettuce (117.6 micrograms per 1 cup); Escarole, fresh (115.5 micrograms per 1 cup); Endive, fresh (115.5 micrograms per 1 cup); Cabbage, fresh (101.5 micrograms per 1 cup); Moderate Level Vitamin K Foods (micrograms per serving listed) include Mustard Greens, fresh (95.2 micrograms per 1 cup); Brussels Sprouts, fresh (77.9 micrograms per 1/2 cup); Butterhead Lettuce (67.1 micrograms per 1 cup); Watercress (42.5 micrograms per 1/2 cup); Yellow Snap Beans (41.3 micrograms per 3/4 cup); Kiwi Fruit (38 micrograms per 2 items); Asparagus, fresh (35.7 micrograms per 2/3 cup); Soybeans, dry roasted (31.8 micrograms per 1/2 cup); Split Peas, boiled (27.5 micrograms per 1/2 cup); Green Peas (27.3 micrograms per 1/2 cup); Soybean Oil (26.2 micrograms per 1 tablespoonful); Abalone, Raw (26.1 micrograms per 1/2 cup); Green Beans, cooked (25.8 micrograms per 1/2 cup). Contact your doctor or pharmacist for more information. Your healthcare professionals may be aware of this interaction and may be monitoring you for it. Do not start, stop, or change your medicine or diet before checking with them first.

Amiodarone Oral

Interactions with Vitamins

Vitamin E

Test tube research on human lung tissue suggests that vitamin E might reduce lung toxicity caused by amiodarone.[1] More research is needed to further investigate this possibility.

Interactions with Foods & Other Compounds

Grapefruit juice

In one controlled study, drinking grapefruit juice while taking amiodarone dramatically increased blood levels of the drug.[2] Consequently, people taking amiodarone should avoid drinking grapefruit juice (and eating grapefruit) to prevent potentially serious side effects.

Pomegranate juice

Pomegranate juice has been shown to inhibit the same enzyme that is inhibited by grapefruit juice.[3,4] The degree of inhibition is about the same for each of these juices. Therefore, it would be reasonable to expect that pomegranate juice might interact with amiodarone in the same way that grapefruit juice does.

Medical Alert

Your condition can cause complications in a medical emergency. For enrollment information call MedicAlert at 1-800-854-1166 (USA), or 1-800-668-1507 (Canada).

Warning

Though this medication often gives great benefits to people with irregular heartbeat, it may infrequently worsen an irregular heartbeat or cause serious (sometimes fatal) side effects. When starting treatment with this drug, your doctor may have you stay in the hospital for proper monitoring.

Amiodarone may take 2 weeks or longer to have an effect in your body. Also, this drug stays in your body for weeks to months, even after you are no longer taking it. Therefore, serious side effects may occur weeks to months after taking amiodarone. Serious side effects may include lung or liver problems. Tell your doctor immediately if you notice any symptoms of lung or liver problems such as cough, shortness of breath, chest pain, coughing up blood, persistent nausea/vomiting, dark urine, severe stomach/abdominal pain, or yellowing eyes/skin.

Precautions

Before taking amiodarone, tell your doctor or pharmacist if you are allergic to it; or to iodine; or if you have any other allergies.

Before using this medication, tell your doctor or pharmacist your medical history, especially of: liver disease, lung disease, thyroid problems.

This drug may make you dizzy. Do not drive, use machinery, or do any activity that requires alertness until you are sure you can perform such activities safely. Limit alcoholic beverages.

This medication may make you more sensitive to the sun. Avoid prolonged sun exposure, tanning booths, and sunlamps. Use a sunscreen and wear protective clothing when outdoors.

Before having surgery, tell your doctors or dentist about all the products you use (including prescription drugs, nonprescription drugs, and herbal products).

Amiodarone may cause a condition that affects the heart rhythm (QT prolongation). QT prolongation can infrequently result in serious (rarely fatal) fast/irregular heartbeat and other symptoms (such as severe dizziness, fainting) that require immediate medical attention. The risk of QT prolongation may be increased if you have certain medical conditions or are taking other drugs that may affect the heart rhythm (see also Drug Interactions section). Before using amiodarone, tell your doctor or pharmacist if you have any of the following conditions: certain heart problems (heart failure, slow heartbeat, QT prolongation in the EKG), family history of certain heart problems (QT prolongation in the EKG, sudden cardiac death).

Low levels of potassium or magnesium in the blood may also increase your risk of QT prolongation. This risk may increase if you use certain drugs (such as diuretics/"water pills") or if you have conditions such as severe sweating, diarrhea, or vomiting. Talk to your doctor about using amiodarone safely.

This medication is not recommended for use during pregnancy. It may harm an unborn baby. Consult your doctor for more details.

Amiodarone passes into breast milk and may have undesirable effects on a nursing infant. Breast-feeding is not recommended while using this drug.

Side Effects

See also Warning section.

Nausea, vomiting, constipation, loss of appetite, shaking, or tiredness may occur. If any of these effects persist or worsen, tell your doctor promptly.

Remember that your doctor has prescribed this medication because he or she has judged that the benefit to you is greater than the risk of side effects. Many people using this medication do not have serious side effects.

Tell your doctor immediately if any of these unlikely but serious side effects occur: easy bruising/bleeding, loss of coordination, tingling/numbness of the hands or feet, uncontrolled movements, new or worsening symptoms of heart failure (such as ankle/leg swelling, increased tiredness, increased shortness of breath when lying down).

Seek immediate medical attention if any of these rare but serious side effects occur: faster/slower/more irregular heartbeat, severe dizziness, fainting.

Amiodarone may infrequently cause thyroid problems. Either low thyroid function or overactive thyroid function may occur. Tell your doctor immediately if you develop any symptoms of low or overactive thyroid, including cold or heat intolerance, unexplained weight loss/gain, thinning hair, unusual sweating, nervousness, irritability, restlessness, or lump/growth in the front of the neck (goiter).

This drug may cause your skin to be more sensitive to the sun. With long-term treatment, you may infrequently develop blue-gray color of the skin. This effect is not harmful and color may return to normal after the drug is stopped. Avoid prolonged sun exposure to help prevent this effect. (See also Precautions section.)

This drug may infrequently cause vision changes. Very rarely, cases of permanent blindness have been reported. Tell your doctor immediately if you develop any vision changes (such as seeing halos or blurred vision).

A very serious allergic reaction to this drug is rare. However, seek immediate medical attention if you notice any symptoms of a serious allergic reaction, including: rash, itching/swelling (especially of the face/tongue/throat), severe dizziness, trouble breathing.

This is not a complete list of possible side effects. If you notice other effects not listed above, contact your doctor or pharmacist.

In the US -

Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

In Canada - Call your doctor for medical advice about side effects. You may report side effects to Health Canada at 1-866-234-2345.

Drug Interactions

See also How to Use section.

Your doctor or pharmacist may already be aware of any possible drug interactions and may be monitoring you for them. Do not start, stop, or change the dosage of any medicine before checking with your doctor or pharmacist first.

Many drugs besides amiodarone may affect the heart rhythm (QT prolongation), including dofetilide, pimozide, procainamide, quinidine, sotalol, macrolide antibiotics (such as erythromycin), quinolone antibiotics (such as levofloxacin), among others. (See also Precautions section.)

Other medications can affect the removal of amiodarone from your body, which may affect how amiodarone works. Examples include azole antifungals (such as itraconazole), cimetidine, protease inhibitors (such as indinavir), rifamycins (such as rifampin), St. John's wort, among others.

Amiodarone can slow down the removal of other medications from your body, which may affect how they work. Examples of affected drugs include beta blockers (such as propranolol), calcium channel blockers (such as diltiazem, verapamil), clopidogrel, cyclosporine, digoxin, phenytoin, certain "statin" drugs (atorvastatin, lovastatin, simvastatin), trazodone, warfarin, among others.

This document does not contain all possible interactions. Therefore, before using this product, tell your doctor or pharmacist of all the products you use. Keep a list of all your medications with you, and share the list with your doctor and pharmacist.

Lipitor

Atorvastatin is a member of the HMG-CoA reductase inhibitor family of drugs that blocks the body's production of cholesterol. Atorvastatin is used to lower high cholesterol.

Do…

- **Keep up your CoQ10 levels** 30 to 100 mg of coenzyme Q10 per day may prevent this heart-healthy nutrient from being depleted by your medication, and it may reduce the likelihood of a potential side effect.
- **Try cholesterol-lowering margarine** Using margarines containing sitostanol (Benecol), which is made from naturally occurring unsaturated sterols from soybean oil (Take Control), can help lower LDL ("bad") cholesterol.
- **Wait for two hours before you take antacids containing magnesium** Products containing magnesium and aluminum may interfere with atorvastatin, so take your med two hours before or after your antacid.

Don't…

- **Take red yeast rice with statins** Although red yeast rice *(Monascus purpureas)* extract has been shown to lower moderately high cholesterol and triglycerides, it contains small amounts of natural HMG-CoA reductase inhibitors and should not be used with statin medications.
- **Disrupt your medicine with grapefruit** Avoid grapefruit and grapefruit juice (and potentially pomegranate) as they may inhibit the body's ability to break down atorvastatin, making it more toxic.

Interactions with Vitamins

Coenzyme Q10

In a group of patients beginning treatment with atorvastatin, the average concentration of coenzyme Q10 in blood plasma decreased within 14 days, and had fallen by approximately 50% after 30 days of treatment.[1] In a preliminary study, supplementation with 100 mg of CoQ10 per day reduced the severity of muscle pain by 40% in people with muscle pain caused by a statin drug.[2] Many doctors recommend that people taking HMG-CoA reductase inhibitor drugs such as atorvastatin also supplement with approximately 100 mg CoQ10 per day, although lower amounts, such as 10 to 30 mg per day, might conceivably be effective in preventing the decline in CoQ10 levels.

Magnesium-containing antacids

A magnesium- and aluminum-containing antacid was reported to interfere with atorvastatin absorption.[3] People can avoid this interaction by taking atorvastatin two hours before or after any aluminum/magnesium-containing antacids. Some magnesium supplements such as magnesium hydroxide are also antacids.

Vitamin B3 (niacin)

Niacin is the form of vitamin B3 used to lower cholesterol. Ingestion of large amounts of niacin along with lovastatin (a drug closely related to atorvastatin) or with atorvastatin itself may cause muscle disorders (myopathy) that can become serious (rhabdomyolysis).[4,5] Such problems appear to be uncommon when HMG-CoA reductase inhibitors are combined with niacin.[6,7] Moreover, concurrent use of niacin with HMG-CoA reductase inhibitors has been reported to enhance the cholesterol-lowering effect of the drugs.[8,9] Individuals taking atorvastatin should consult their physician before taking niacin.

Sitostanol

A synthetic molecule related to beta-sitosterol, sitostanol, is available in a special margarine and has been shown to lower cholesterol levels. In one study, supplementing with 1.8 grams of sitostanol per day for six weeks enhanced the cholesterol-lowering effect of various statin drugs.[10]

Vitamin A

A study of 37 people with high cholesterol treated with diet and HMG-CoA reductase inhibitors found blood vitamin A levels increased over two years of therapy.[11] Until more is known, people taking HMG-CoA reductase inhibitors, including atorvastatin, should have blood levels of vitamin A monitored if they intend to supplement vitamin A.

Interactions with Herbs

Red yeast rice *(Monascus purpureas)*

A supplement containing red yeast rice (Cholestin) has been shown to effectively lower cholesterol and triglycerides in people with moderately elevated levels of these blood lipids.[12] This extract contains small amounts of naturally occurring HMG-CoA reductase inhibitors such as lovastatin and should not be used if you are currently taking a statin medication.

Interactions with Foods & Other Compounds

Food

Atorvastatin is best absorbed when taken without food[13] in the morning.[14] However, it has been reported to be equally well absorbed when taken with or without food.[15]

Grapefruit or grapefruit juice

Grapefruit contains substances that may inhibit the body's ability to break down atorvastatin; consuming grapefruit or grapefruit juice might therefore increase the potential toxicity of the drug. There is one case report of a woman developing severe muscle damage from simvastatin (a drug similar to atorvastatin) after she began eating one grapefruit per day.[16] Although there have

been no reports of a grapefruit–atorvastatin interaction, to be on the safe side, people taking atorvastatin should not eat grapefruit or drink grapefruit juice.

Pomegranate juice

Pomegranate juice has been shown to inhibit the same enzyme that is inhibited by grapefruit juice.[17, 18] The degree of inhibition is about the same for each of these juices. Therefore, it would be reasonable to expect that pomegranate juice might interact with atorvastatin in the same way that grapefruit juice does.

Precautions

Before taking atorvastatin, tell your doctor or pharmacist if you are allergic to it; or if you had a severe reaction to other "statins" (e.g., simvastatin); or if you have any other allergies.

This medication should not be used if you have a certain medical condition. Before using this medicine, consult your doctor or pharmacist if you have: current liver disease.

Before using this medication, tell your doctor or pharmacist your medical history, especially of: history of liver disease, kidney disease, alcohol use/abuse.

Before having surgery, tell your doctor or dentist that you are taking this medication.

Limit alcoholic beverages. Daily use of alcohol may increase your risk for liver problems, especially when combined with atorvastatin. Ask your doctor or pharmacist for more information.

Older adults may be more sensitive to the side effects of the drug, especially muscle problems.

This medication must not be used during pregnancy. Atorvastatin may harm an unborn baby. Therefore, it is important to prevent pregnancy while taking this medication. Consult your doctor for more details and to discuss using at least 2 reliable forms of birth control (e.g., condoms, birth control pills) while taking this medication. If you become pregnant or think you may be pregnant, tell your doctor immediately.

This drug may pass into breast milk and could have undesirable effects on a nursing infant. Therefore, breast-feeding is not recommended while using this drug. Consult your doctor before breast-feeding.

Side Effects

Diarrhea or stomach/abdominal pain may occur. If any of these effects persist or worsen, tell your doctor or pharmacist promptly.

Remember that your doctor has prescribed this medication because he or she has judged that the benefit to you is greater than the risk of side effects. Many people using this medication do not have serious side effects.

This drug may infrequently cause muscle problems (which can rarely lead to a very serious condition called rhabdomyolysis). Tell your doctor immediately if you develop any of these symptoms: muscle pain/tenderness/weakness (especially with fever or unusual tiredness), change in the amount of urine.

Tell your doctor immediately if any of these rare but very serious side effects occur: yellowing eyes/skin, dark urine, severe stomach/abdominal pain, persistent nausea/vomiting.

A very serious allergic reaction to this drug is rare. However, seek immediate medical attention if you notice any symptoms of a serious allergic reaction, including: rash, itching/swelling (especially of the face/tongue/throat), severe dizziness, trouble breathing.

This is not a complete list of possible side effects. If you notice other effects not listed above, contact your doctor or pharmacist.

In the US -

Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

In Canada - Call your doctor for medical advice about side effects. You may report side effects to Health Canada at 1-866-234-2345.

Drug Interactions

Your doctor or pharmacist may already be aware of any possible drug interactions and may be monitoring you for them. Do not start, stop, or change the dosage of any medicine before checking with your doctor or pharmacist first.

See also How to Use section.

This drug should not be used with the following medication because very serious (possibly fatal) interactions may occur: telithromycin.

If you are currently using this medication, tell your doctor or pharmacist before starting atorvastatin.

Before using this medication, tell your doctor or pharmacist of all prescription and nonprescription/herbal products you may use, especially of: aliskiren, hormonal birth control (e.g., pills, patch, ring), clopidogrel, daptomycin, digoxin, drugs affecting liver enzymes that remove atorvastatin from your body (such as azole antifungals including itraconazole/ketoconazole, certain macrolide antibiotics including erythromycin/clarithromycin/

troleandomycin, HIV protease inhibitors including indinavir/ritonavir, amiodarone, cyclosporine, diltiazem, efavirenz, nefazodone, rifampin, St. John's wort, carbamazepine).

This document does not contain all possible interactions. Therefore, before using this product, tell your doctor or pharmacist of all the products you use. Keep a list of all your medications with you, and share the list with your doctor and pharmacist.

Coumadin

Interactions with Vitamins

Bromelain

In theory, bromelain might enhance the action of anticoagulants. This theoretical concern has not been substantiated by human research, however.[1]

Coenzyme Q10

Coenzyme Q10 (CoQ10) is structurally similar to vitamin K and may affect blood coagulation.[2] Four case reports describe possible interference by CoQ10 with warfarin activity.[3, 4, 5] It remains unknown how common or rare this interaction is. Those taking warfarin should only take CoQ10 with the guidance of their doctor.

Minerals

Iron, magnesium, and zinc may bind with warfarin, potentially decreasing their absorption and activity.[6] People on warfarin therapy should take warfarin and iron/magnesium/zinc-containing products at least two hours apart.

Papain

Papain, an enzyme extract of papaya, was associated with increased warfarin activity in one patient.[7] Persons taking warfarin should avoid papain supplements until further information about this potential interaction becomes available.

Vitamin C

Although case reports have suggested that vitamin C might increase the activity of anticoagulants in a potentially dangerous way, this interaction has not been confirmed in research studies.[8] In fact, a possible interference by vitamin C with the effect of anticoagulants has also been reported.[9] A 52-year-old woman maintained on 7.5 mg of warfarin per day had a shortening of the blood clotting time which was not corrected by increasing warfarin up to 20 mg per day. Further questioning revealed she had begun taking an unspecified amount of vitamin C each morning. After stopping vitamin C, the blood clotting time returned to desired levels. Based on this and other case reports, people taking warfarin should consult with their physician before taking vitamin C supplements.

Vitamin D

In 1975, a single letter to the *Journal of the American Medical Association* suggested that vitamin D increases the activity of anticoagulants and that this interaction could prove dangerous.[10] However, there have been no other reports of such an interaction, even though tens

of millions of people are taking multivitamins that contain vitamin D. Most doctors typically do not tell patients taking anticoagulant medications to avoid vitamin D.

Vitamin E

An isolated case was reported in 1974 of vitamin E (up to 1,200 IU per day) being associated with increased anticoagulation (blood thinning) in a patient treated with warfarin.[11] A study of 12 people undergoing warfarin therapy found that additional vitamin E (100 IU or 400 IU per day) did not induce a clinical bleeding state.[12] Moreover, a double-blind trial found that supplementation with vitamin E in amounts up to 1,200 IU per day had no effect on warfarin activity.[13] It now appears safe for people taking warfarin to supplement vitamin E despite information to the contrary often provided by doctors about this purported interaction. These warnings are based on the isolated case report from 1974.

Vitamin K

Warfarin slows blood clotting by interfering with vitamin K activity. Since vitamin K reverses the anticoagulant effects of warfarin,[14] people taking warfarin should avoid vitamin K-containing supplements unless specifically directed otherwise by their prescribing doctor. Some vegetables (broccoli, Brussels sprouts, kale, parsley, spinach, and others) are high in vitamin K. Eating large quantities[15] or making sudden changes in the amounts eaten of these vegetables can interfere with the effectiveness and safety of warfarin therapy. The greener the plant, the higher the vitamin K content.[16] Other significant dietary sources of vitamin K include soybean oil, olive oil, cottonseed oil, and canola oil.[17]

Vitamin K supplementation can be used, however, to counteract an overdose of warfarin.[18] In addition, controlled and continuous supplementation with vitamin K (100 to 150 mcg per day) has been used effectively to reduce the fluctuations in dosage requirement that occur in some people taking warfarin or related drugs that have the same action as warfarin.[19,20,21] Such treatment requires a doctor's supervision.

Interactions with Herbs

Asian ginseng *(Panax ginseng)*

Asian ginseng was associated with a decrease in warfarin activity in a case report.[22] However, in a clinical trial, no interaction was seen between Asian ginseng and warfarin.[23] An animal study also found no significant interaction between warfarin and pure ginseng extract.[24] Nevertheless, persons taking warfarin should consult with a physician knowledgeable about botanical medicines if they are considering taking Asian ginseng or eleuthero/Siberian ginseng *(Eleutherococcus senticosus)*. A 1999 animal study did not reveal any significant interaction between warfarin and pure ginseng extract.[25]

American ginseng

In a study of healthy human volunteers, supplementing with American ginseng reduced warfarin's anticoagulant effect, apparently by stimulating the body to accelerate the metabolism of warfarin.[26] People taking warfarin should not take American ginseng, unless supervised by a doctor.

Cranberry

There have been at least five case reports suggesting that cranberry juice increases the activity of warfarin, possibly by inhibiting the breakdown of warfarin in the body.[27] Because of this potential interaction, people taking warfarin should avoid, or limit the intake of, cranberry juice. The U.K. Medicines Authority has advised people taking warfarin to avoid cranberry juice.

Dan shen *(Salvia miltiorrhiza)*

Dan shen, a Chinese herb, was associated with increased warfarin activity in several cases.[28, 29, 30, 31] Dan shen should only be used under close medical supervision by people taking warfarin. Sage *(Salvia officinalis)*, a plant relative of dan shen found in the West, is not associated with interactions involving warfarin.

Devil's claw *(Harpagophytum procumbens)*

Devil's claw was associated with purpura (bleeding under the skin) in a patient treated with warfarin.[32] However, key details in this case—including other medications taken and the amounts and duration of warfarin and devil's claw taken—were not reported, making it impossible to evaluate this reported interaction. Until more is known, people taking warfarin should avoid taking devil's claw.

Dong quai *(Angelica sinensis)*

A 46-year-old woman taking warfarin experienced increased strength of the anticoagulant properties of the drug after starting to use dong quai for menopause.[33] The daily amount of dong quai was 1,130–2,260 mg per day. Her bleeding tendency returned to normal after discontinuing the dong quai. While little is known about the potential interaction of dong quai and warfarin, women should discuss the use of the herb with a healthcare professional if they are taking an anticoagulant drug and wish to use dong quai.

Feverfew *(Tanacetum parthenium)*

Although there are no documented cases of feverfew interacting with warfarin in humans, feverfew has been shown to interfere with certain aspects of blood clotting in test tube studies.[34, 35, 36]

Garlic *(Allium sativum)*

Garlic has been shown to help prevent atherosclerosis (hardening of the arteries), perhaps by reducing the ability of platelets to stick together.[37] This can result in an increase in the tendency toward bleeding.[38] Standardized extracts have, on rare occasions, been associated with bleeding in people.[39] Garlic extracts have also been associated with two human cases of increased warfarin activity.[40] The extracts were not definitively shown to be the cause of the problem. People taking warfarin should consult with a doctor before taking products containing standardized extracts of garlic or eating more than one clove of garlic daily.

Ginger *(Zingiber officinale)*

Ginger has been shown to reduce platelet stickiness in test tubes. Although there are no reports of interactions with anticoagulant drugs, people should consult a healthcare professional if they are taking an anticoagulant and wish to use ginger.[41]

Ginkgo

Ginkgo extracts may reduce the ability of platelets to stick together, possibly increasing the tendency toward bleeding.[42] Standardized extracts of ginkgo have been associated with two cases of spontaneous bleeding, although the ginkgo extracts were not definitively shown to be the cause of the problem.[43, 44] There are two case reports of people taking warfarin in whom bleeding occurred after the addition of ginkgo.[45, 46] People taking warfarin should consult with a physician knowledgeable about botanical medicines if they are considering taking ginkgo.

Goji berry

There is one reported case of increased bleeding tendency in a woman taking warfarin who also drank 3 to 4 glasses per day of goji berry tea.

Grapefruit seed extract

In case reports, ingestion of grapefruit seed extract interfered with the effect of warfarin.[47] This inhibitory effect appeared to be due to benzethonium chloride, a synthetic preservative that is added to most grapefruit seed extract products.

Green tea *(Camellia sinensis)*

One man taking warfarin and one-half to one gallon of green tea per day developed signs based on laboratory testing suggesting his blood was too thick because the green tea was blocking the effect of warfarin.[48] Removal of the green tea caused normalization of his blood tests. Those taking green tea and warfarin together should have their blood monitored regularly to avert any problems and should consult with a doctor, healthcare practitioner and/or pharmacist before taking any medication.

Herbs containing coumarin derivatives

Although there are no specific studies demonstrating interactions with anticoagulants, the following herbs contain coumarin-like substances that may interact with warfarin and may cause bleeding.[49] These herbs include angelica root, arnica flower, anise, asafoetida, celery, chamomile, corn silk, fenugreek, horse chestnut, licorice root, lovage root, parsley, passion flower herb, quassia, red clover, rue, sweet clover, and sweet woodruff. Dong quai contains at least six coumarin derivatives, which may account for the interaction noted above. People should consult a healthcare professional if they are taking an anticoagulant and wish to use one of these herbs.

Lycium barbarum

There is one case report in which ingestion of a Chinese herbal tea made from *Lycium barbarum* appeared to interfere with the effect of warfarin.[50]

Quinine (*Cinchona* species)

Quinine, a chemical found in cinchona bark and available as a drug product, has been reported to increase warfarin activity.[51] People should read labels for quinine/cinchona content. People taking warfarin should avoid quinine-containing products.

Quilinggao

There is one published case report in which the Chinese herbal product quilinggao increased the action of warfarin and apparently contributed to a bleeding episode.[52] There are many different brands of quilinggao, and the composition varies between manufacturers. Individuals taking warfarin should not take quilinggao.

Reishi (*Ganoderma lucidum*)

As it may increase bleeding time, reishi is not recommended for those taking anticoagulant (blood-thinning) medications.[53]

St. John's wort (*Hypericum perforatum*)

According to a preliminary report, volunteers taking 900 mg per day of St. John's wort were given a single dose of an anticoagulant similar in action to warfarin.[54] There was a significant drop in the amount of the drug measured in the blood. Seven case studies reported to the Medical Products Agency in Sweden also found a decrease in the anticoagulant activity of warfarin when St. John's wort was taken at the same time.[55] This may have occurred because certain chemicals found in St. John's wort activate liver enzymes that are involved in the elimination of some drugs.[56, 57] People taking warfarin should consult with their doctor before taking St. John's wort.

Interactions with Foods & Other Compounds

Alcohol

Alcohol use, especially long-term heavy drinking, can decrease the effectiveness of warfarin.[58, 59] People taking warfarin are cautioned to avoid alcohol.

Food

Some vegetables (broccoli, Brussels sprouts, kale, parsley, spinach, and others) are high in vitamin K. Eating large quantities[60] or making sudden changes in the amounts eaten of these vegetables, interferes with the effectiveness and safety of warfarin therapy. Eating charbroiled food may decrease warfarin activity,[61] while eating cooked onions may increase warfarin activity.[62] Soy foods have been reported both to increase[63] and to decrease[64] warfarin activity. The significance of these last three interactions remains unclear.

Preliminary evidence suggests that frequent consumption of mangoes may interfere with the effect of warfarin.[65]

There is one preliminary report in which a high-protein, low-carbohydrate diet appeared to interfere with the effect of warfarin in two people.[66] While additional research is needed to confirm that observation, people taking warfarin should consult their doctor before making large changes in the amount of protein they eat.

Olestra

The FDA-approved fat substitute, olestra, interferes with fat absorption, including the absorption of fat-soluble vitamins. Vitamin K, a fat-soluble vitamin, is added to olestra to offset this adverse effect.[67] Since vitamin K interferes with the activity of warfarin, eating snacks containing olestra may also interfere with the drug's activity. The impact of eating snacks containing olestra has not been evaluated in people taking warfarin. However, until more is known, it makes sense for people taking warfarin to avoid olestra-containing foods.[68]

Medical Alert

Your condition and medication can cause complications in a medical emergency. For information about enrolling in MedicAlert, call 1-800-854-1166 (USA) or 1-800-668-1507 (Canada).

Warning

Warfarin can cause very serious (possibly fatal) bleeding. This is more likely to occur when you first start taking this medication and/or when you are taking too much warfarin.

To decrease your risk for bleeding, your doctor or other health care provider will monitor you closely and check your lab results (INR test) to make sure you are not taking too much warfarin.

Keep all medical and laboratory appointments. Tell your doctor immediately if you notice any signs of serious bleeding. See also Side Effects section.

Precautions

Before taking warfarin, tell your doctor or pharmacist if you are allergic to it; or if you have any other allergies.

This medication should not be used if you have certain medical conditions. Before using this medicine, consult your doctor or pharmacist if you have: bleeding disorders (such as hemophilia).

Before using this medication, tell your doctor or pharmacist your medical history, especially of: liver disease, alcohol use/abuse, mental/mood disorders (including memory problems), recent major injury/surgery, bleeding problems (such as bleeding of the stomach/intestines, bleeding in the brain), blood vessel disorders (such as aneurysms), blood disorders (such as anemia, polycythemia), heart failure, thyroid problems, family member who did not respond to warfarin treatment, frequent falls/injuries, vitamin deficiency or absorption problems.

It is important that all your doctors and dentists know that you take warfarin. Before having surgery or any medical/dental procedures, tell your doctor or dentist that you are using this medication.

Avoid getting injections into the muscles. If you must have an injection into a muscle (for example, a flu shot), it should be given in the arm. This way, it will be easier to check for bleeding and/or apply pressure bandages.

This medication may cause stomach bleeding. Daily use of alcohol while using this medicine will increase your risk for stomach bleeding and may also affect how this medication works. Limit or avoid alcoholic beverages.

If you have not been eating well, if you have an illness or infection that causes fever, vomiting, or diarrhea for more than 2 days, or if you start using any antibiotic medications, contact your doctor or pharmacist immediately because these conditions can affect how warfarin works.

This medication can cause heavy bleeding. To lower the chance of getting cut, bruised, or injured, use great caution with sharp objects like safety razors and nail cutters. Use an electric razor when shaving and a soft toothbrush when brushing your teeth. Avoid activities such as contact sports. If you fall or injure yourself, especially if you hit your head, call your doctor immediately. Your doctor may need to check you.

The Food & Drug Administration has stated that generic warfarin products are interchangeable. However, consult your doctor or pharmacist before switching warfarin products. Be careful not to take more than one medication that contains warfarin unless specifically directed by the doctor or health care provider who is monitoring your warfarin treatment.

Older adults may be at greater risk for bleeding while using this drug.

This medication is not recommended for use during pregnancy because of serious (possibly fatal) harm to an unborn baby. Discuss reliable forms of birth control with your doctor. If you become pregnant or think you may be pregnant, tell your doctor immediately. If you are planning pregnancy, discuss a plan for managing your condition with your doctor before you become pregnant. Your doctor may switch the type of medication you use during pregnancy.

This medication does not pass into breast milk. While there have been no reports of harm to nursing infants, consult your doctor before breast-feeding.

Side Effects

Nausea, loss of appetite, or stomach/abdominal pain may occur. If any of these effects persist or worsen, tell your doctor or pharmacist promptly.

Remember that your doctor has prescribed this medication because he or she has judged that the benefit to you is greater than the risk of side effects. Many people using this medication do not have serious side effects.

This medication can cause serious bleeding if it affects your blood clotting proteins too much (shown by unusually high INR lab results). Even if your doctor stops your medication, this risk of bleeding can continue for up to a week. Tell your doctor immediately if you have any signs of serious bleeding, including: unusual pain/swelling/discomfort, unusual/easy bruising, prolonged bleeding from cuts or gums, persistent/frequent nosebleeds, unusually heavy/prolonged menstrual flow, pink/dark urine, coughing up blood, vomit that is bloody or looks like coffee grounds, severe headache, dizziness/fainting, unusual or persistent tiredness/weakness, bloody/black/tarry stools, chest pain, shortness of breath, difficulty swallowing.

Tell your doctor immediately if any of these unlikely but serious side effects occur: persistent nausea/vomiting, severe stomach/abdominal pain, yellowing eyes/skin.

This drug rarely has caused very serious (possibly fatal) problems if its effects lead to small blood clots (usually at the beginning of treatment). This can lead to severe skin/tissue damage that may require surgery or amputation if left untreated. Patients with certain blood conditions (protein C or S deficiency) may be at greater risk. Seek immediate medical attention if any of these rare but very serious side effects occur: painful/red/purplish patches on the skin (such as on the toe, breast, abdomen), change in the amount of urine, vision changes, confusion, slurred speech, weakness on one side of the body.

A very serious allergic reaction to this drug is rare. However, seek immediate medical attention if you notice any symptoms of a serious allergic reaction, including: rash, itching/swelling (especially of the face/tongue/throat), severe dizziness, trouble breathing.

This is not a complete list of possible side effects. If you notice other effects not listed above, contact your doctor or pharmacist.

In the US -

Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

In Canada - Call your doctor for medical advice about side effects. You may report side effects to Health Canada at 1-866-234-2345.

Drug Interactions

Your doctor or pharmacist may already be aware of any possible drug interactions and may be monitoring you for them. Do not start, stop, or change the dosage of any drug, vitamin, or herbal product without checking with your doctor or pharmacist first.

Warfarin interacts with many prescription, nonprescription, vitamin, and herbal products. This includes medications that are applied to the skin or inside the vagina or rectum. The following interactions listed do not contain all possible drug interactions. The interactions with warfarin usually result in an increase or decrease in the "blood-thinning" (anticoagulant) effect. Your doctor or other health care professional should closely monitor you to prevent serious bleeding or clotting problems. While taking warfarin, it is very important to tell your doctor or pharmacist of any changes in medications, vitamins, or herbal products that you are taking.

This drug should not be used with the following medications because very serious interactions may occur: imatinib, mifepristone.

If you are currently using any of these medications listed above, tell your doctor or pharmacist before starting warfarin.

Aspirin and aspirin-like drugs (salicylates) and nonsteroidal anti-inflammatory drugs (NSAIDs such as ibuprofen, naproxen, celecoxib) may have effects similar to warfarin. These drugs may increase the risk of bleeding problems if taken during treatment with warfarin. Carefully check all prescription/nonprescription product labels (including drugs applied to the skin such as pain-relieving creams) since the products may contain NSAIDs or salicylates. Talk to your doctor about using a different medication (such as acetaminophen) to treat pain/fever. Low-dose aspirin and related drugs (such as clopidogrel, ticlopidine) should be continued if prescribed by your doctor for specific medical reasons such as heart attack or stroke prevention. Consult your doctor or pharmacist for more details.

Many herbal medications have "blood-thinning" or "blood-clotting" effects, and some may directly affect warfarin. Tell your doctor before taking any herbal products, especially bromelains, coenzyme Q10, cranberry, danshen, dong quai, fenugreek, garlic, ginkgo biloba, ginseng, goldenseal, and St. John's wort, among others.

This medication may interfere with a certain laboratory test to measure theophylline levels, possibly causing false test results. Make sure laboratory personnel and all your doctors know you use this drug.

This document does not contain all possible interactions. Therefore, before using this product, tell your doctor or pharmacist of all the products you use. Keep a list of all your medications with you, and share the list with your doctor and pharmacist.

Aspirin

Interactions with Vitamins

Folic acid

Increased loss of folic acid in urine has been reported in rheumatoid arthritis patients.[1] Reduced blood levels of the vitamin have also been reported in people with arthritis who take aspirin.[2] Some doctors recommend for people with arthritis who regularly take aspirin to supplement 400 mcg of folic acid per day—an amount frequently found in multivitamins.

Iron

Gastrointestinal (GI) bleeding is a common side effect of taking aspirin. A person with aspirin-induced GI bleeding may not always have symptoms (like stomach pain) or obvious signs of blood in their stool. Such bleeding causes loss of iron from the body. Long-term blood loss due to regular use of aspirin can lead to iron-deficiency anemia. Lost iron can be replaced with iron supplements. Iron supplementation should be used only in cases of iron deficiency verified with laboratory tests.

Vitamin B12

In a study of people hospitalized with heart disease, those who had been taking aspirin were nearly twice as likely as nonusers to have a low or marginally low blood level of vitamin B12.[3] That finding by itself does not prove that taking aspirin causes vitamin B12 deficiency. However, aspirin is known to damage the stomach in some cases, and the stomach plays a key role in vitamin B12 absorption (by secreting hydrochloric acid and intrinsic factor).

Vitamin C

Taking aspirin has been associated with increased loss of vitamin C in urine and has been linked to depletion of vitamin C.[4] People who take aspirin regularly should consider supplementing at least a few hundred milligrams of vitamin C per day. Such an amount is often found in a multivitamin.

Vitamin E

Although vitamin E is thought to act like a blood thinner, very little research has supported this idea. In fact, a double-blind trial found that very high amounts of vitamin E do not increase the effects of the powerful blood-thinning drug warfarin.[5] Nonetheless, a double-blind study of smokers found the combination of aspirin plus 50 IU per day of vitamin E led to a statistically significant increase in bleeding gums compared with taking aspirin alone (affecting one person in three versus one in four with just aspirin).[6] The authors concluded that vitamin E might, especially if combined with aspirin, increase the risk of bleedings.

Zinc

Intake of 3 grams of aspirin per day has been shown to decrease blood levels of zinc.[7] Aspirin appeared to increase loss of zinc in the urine in this study, and the effect was noted beginning three days after starting aspirin.

Interactions with Herbs

Cayenne *(Capsicum annuum, Capsicum frutescens)*

Cayenne contains the potent chemical capsaicin, which acts on special nerves found in the stomach lining. In two rat studies, researchers reported that stimulation of these nerves by capsaicin might protect against the damage aspirin can cause to the stomach.[8, 9] In a study of 18 healthy human volunteers, a single dose of 600 mg aspirin taken after ingestion of 20 grams of chili pepper was found to cause less damage to the lining of the stomach and duodenum (part of the small intestine) than aspirin without chili pepper.[10] However, cayenne may cause stomach irritation in some individuals with stomach inflammation (gastritis) or ulcers and should be used with caution.

Coleus *(Coleus forskohlii)*

There are theoretical grounds to believe that coleus could increase the effect of anti-platelet medicines such as aspirin, possibly leading to spontaneous bleeding. However, this has never been documented to occur. Controlled human research is needed to determine whether people taking aspirin should avoid coleus.

Ginkgo biloba

There have been two case reports suggesting a possible interaction between ginkgo and an anticoagulant drug or aspirin leading to increased bleeding.[11, 12] In the first, a 78-year-old woman taking warfarin developed bleeding within the brain following the concomitant use of ginkgo (the amount used is not given in the case report). In the second, a 70-year-old man developed slow bleeding behind the iris of the eye (spontaneous hyphema) following use of ginkgo (80 mg per day) together with aspirin (325 mg per day). While this interaction is unproven, anyone taking anticoagulant medications or aspirin should inform their physician before using ginkgo.

Licorice (DGL) *(Glycyrrhiza glabra)*

The flavonoids found in the extract of licorice known as DGL (deglycyrrhizinated licorice) are helpful for avoiding the irritating actions aspirin has on the stomach and intestines. One study found that 350 mg of chewable DGL taken together with each dose of aspirin reduced gastrointestinal bleeding caused by the aspirin.[13] DGL has been shown in controlled human research to be as effective as drug therapy (cimetidine) in healing stomach ulcers.[14] One animal study also showed that DGL and the acid-blocking drug Tagamet® (cimetidine) work together more effectively than either alone for preventing negative actions of aspirin.[15]

Precautions

Before taking aspirin, tell your doctor or pharmacist if you are allergic to it; or to other salicylates (such as choline salicylate); or to other pain relievers or fever reducers (NSAIDs such as ibuprofen, naproxen); or if you have any other allergies.

This medication should not be used if you have certain medical conditions. Before using this medicine, consult your doctor or pharmacist if you have: bleeding/blood-clotting disorders (such as hemophilia, vitamin K deficiency, low platelet count).

If you have any of the following health problems, consult your doctor or pharmacist before using this medication: kidney disease, liver disease, diabetes, stomach problems (such as ulcers, heartburn, stomach pain), aspirin-sensitive asthma (a history of worsening breathing with runny/stuffy nose after taking aspirin or other NSAIDs), growths in the nose (nasal polyps), gout, certain enzyme deficiencies (pyruvate kinase or G6PD deficiency).

This medicine may cause stomach bleeding. Daily use of alcohol and tobacco, especially when combined with this product, may increase your risk for this side effect. Limit alcoholic beverages, and stop smoking. Check with your doctor or pharmacist for more information.

Before having surgery, tell your doctor or dentist that you are taking this medication.

Children and teenagers should not take aspirin if they have chickenpox, flu, or any undiagnosed illness or if they have recently received a vaccine. In these cases, taking aspirin increases the risk of Reye's syndrome, a rare but serious illness. Tell your doctor promptly if you see changes in behavior with nausea and vomiting. This may be an early sign of Reye's syndrome.

Older adults may be more sensitive to the side effects of this drug, especially stomach ulcers.

Aspirin is not recommended for use during pregnancy. Consult your doctor before using this medication if you are or think you may be pregnant. Tell your doctor immediately if you become pregnant while taking this medication. Do not use this medication during the last 3 months of pregnancy because of possible harm to the unborn baby or problems during delivery.

Aspirin passes into breast milk and may harm the nursing infant. Breast-feeding while using this drug is not recommended. Consult your doctor before breast-feeding.

Side Effects

Upset stomach and heartburn may occur. If either of these effects persist or worsen, tell your doctor or pharmacist promptly.

If your doctor has directed you to use this medication, remember that he or she has judged that the benefit to you is greater than the risk of side effects. Many people using this medication do not have serious side effects.

Tell your doctor immediately if any of these unlikely but serious side effects occur: easy bruising/bleeding, difficulty hearing, ringing in the ears, change in the amount of urine, persistent or severe nausea/vomiting, unexplained tiredness, dizziness, dark urine, yellowing eyes/skin.

This drug may rarely cause serious bleeding from the stomach/intestine or other areas of the body. If you notice any of the following rare but very serious side effects, seek immediate medical attention: black/tarry stools, persistent or severe stomach/abdominal pain, vomit that looks like coffee grounds, slurred speech, weakness on one side of the body, sudden vision changes or severe headache.

A very serious allergic reaction to this drug is rare. However, seek immediate medical attention if you notice any symptoms of a serious allergic reaction, including: rash, itching/swelling (especially of the face/tongue/throat), severe dizziness, trouble breathing.

This is not a complete list of possible side effects. If you notice other effects not listed above, contact your doctor or pharmacist.

In the US -

Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

In Canada - Call your doctor for medical advice about side effects. You may report side effects to Health Canada at 1-866-234-2345.

Drug Interactions

If you are taking this product under your doctor's direction, your doctor or pharmacist may already be aware of possible drug interactions and may be monitoring you for them. Before you start taking this medication for self-treatment, consult your doctor or pharmacist if you are also using any prescription and nonprescription medications. Do not start, stop, or change the dosage of any medicine before checking with your doctor or pharmacist first.

This drug should not be used with the following medications because very serious interactions may occur: ketorolac, mifepristone.

If you are currently using any of these medications, tell your doctor or pharmacist before starting aspirin.

Before using this product, consult your doctor if you have recently received certain live vaccines (such as varicella vaccine, live flu vaccine).

Before using this medication, tell your doctor or pharmacist of all prescription and nonprescription products you may use, especially of: acetazolamide, bisphosphonates taken by mouth (such as alendronate), "blood thinners" (such as warfarin, heparin), high blood pressure drugs (such as ACE inhibitors such as captopril, beta blockers such as metoprolol), NSAIDs (nonsteroidal anti-inflammatory drugs such as ibuprofen, naproxen), corticosteroids (such as

prednisone), diabetes drugs (such as chlorpropamide, glyburide), methotrexate, pemetrexed, SSRI antidepressants (such as fluoxetine, sertraline), valproic acid, herbal medications such as ginkgo biloba.

Check all prescription and nonprescription medicine labels carefully since many medications contain pain relievers/fever reducers known as NSAIDs (non-steroidal anti-inflammatory drugs such as ibuprofen, naproxen). To prevent an overdose of aspirin, read the labels carefully before taking other pain relievers or cold products to make sure they do not contain aspirin. Ask your pharmacist about using these products safely.

Daily use of NSAIDs (such as ibuprofen) may decrease aspirin's ability to prevent heart attack/stroke. If you are taking low-dose aspirin for prevention of heart attack/stroke, consult your doctor or pharmacist for more details and to discuss other possible treatments (such as acetaminophen) for your pain/fever.

This medication may interfere with certain laboratory tests (including certain urine sugar tests), possibly causing false test results. Make sure laboratory personnel and all your doctors know you are taking this medication.

This document does not contain all possible interactions. Therefore, before using this product, tell your doctor or pharmacist of all the products you use. Keep a list of all your medications with you, and share the list with your doctor and pharmacist.