



NBCHT Drug Information

USEFUL DRUG INFORMATION FOR COLON HYDROTHERAPISTS

NSAIDs

Non-steroidal anti-inflammatory Drugs are commonly prescribed for treatment of pain and inflammation eg. joint pain, arthritis, gout, backache, sports injury, menstrual pain, headaches etc. As a group of drugs, they are taken regularly by approximately 33 million Americans.

Common examples of NSAIDs are :

Aspirin salsalate (Amigesic), diflunisal (Dolobid), ibuprofen (Motrin), ketoprofen (Orudis), nabumetone (Relafen), piroxicam (Feldene), naproxen (Aleve, Naprosyn,) diclofenac (Voltaren), indomethacin (Indocin), sulindac (Clinoril), tolmetin (Tolectin), etodolac (Lodine), ketorolac (Toradol), oxaprozin (Daypro), celecoxib (Celebrex).

Side effects of NSAIDs

Major side effects of NSAIDs are on the gastrointestinal system. Between 10%-50% of patients experiences side effects such as [abdominal pain](#), [diarrhea](#), bloating, heartburn, and indigestion. A smaller percentage taking NSAIDs long- term run the risk of developing stomach and duodenal ulcers with additional risk of complications such as bleeding or perforation.

These side effects of NSAIDs are attributed to its mechanism of action. The body produces prostaglandins, chemical agents involved in the natural physiological inflammatory response. Prostaglandins are produced in cells by the enzyme cyclooxygenase (COX). There are **two types of cyclogenase enzymes : COX-1 and COX-2**. Both enzymes produce prostaglandins that promote inflammation, pain, and fever. However, *only COX-1 produces prostaglandins that support platelets and protect the stomach.*

Common anti-inflammatory drugs like aspirins and ibuprofen block both COX-1 and COX-2 enzymes and reduce prostaglandins throughout the body. As a consequence, ongoing inflammation, pain, and fever are reduced.

However by reducing prostaglandins (blocking of COX-1 enzyme) in the stomach, the protective action of prostaglandin on the stomach and its beneficial effects on platelets and blood clotting is compromised, resulting in risk of stomach ulceration and bleeding.

Newer NSAIDs are Cox-2 inhibitors

New generations of NSAIDs are more specific in actions. These drugs are uniquely different from traditional NSAIDs by selectively blocking the COX-2 enzyme and not the COX-1 enzyme.

By blocking only the COX-2 enzymes which impede the production of prostaglandins in the body it reduces pain, swelling and inflammation without causing adverse effects in the stomach (no action of COX-1 enzymes and thus no reduction of prostaglandin in the stomach). Selective COX-2 inhibitor such as Celebrax (celecoxib) is therefore less likely to cause bleeding and ulcers.

Other side effects of NSAIDs

NSAIDs also causes some common side effects such as nausea, vomiting, diarrhea, constipation, decreased appetite, rash, dizziness, headache, and drowsiness and edema. The more serious side effects include kidney failure, liver failure, ulcers and prolonged bleeding after an injury or surgery.

In spite of the lower incidence of adverse effects with the use of COX-2 inhibitors, FDA has issued guidelines regarding its use. These guidelines are based on the latest available scientific data that indicate an increased risk of cardiovascular (CV) events and gastrointestinal (GI) bleeding associated with their use.

Prednisone

Prednisone is a steroid. It is a life saving drug in various medical conditions such as bronchial asthma, anaphylaxis and shock conditions. It is also a drug commonly prescribed for chronic health conditions including psoriasis, rheumatoid arthritis, osteoarthritis, gout and various inflammatory disorders.

The problem with the use of this drug is that it can aggravate some medical conditions such as diabetes, osteoporosis, hypertension, glaucoma, peptic ulcers and cause the trigger an infection etc.

Its wide clinical efficacy in many health conditions makes it a common prescription drug. While it is useful in the resolution of many health problems, it is a drug that is overused and abused.

Long term use can suppress immunity resistance and lead to fluid accumulation as well as Cushing's syndrome.

Drug interactions with other drugs such as barbiturates, rifampicin, cyclosporine, NSAIDs, antacids and insulin can result in elevation of drug concentration or enhancement of toxicity of other drugs. Any patients on prednisone (or other formulation of steroids) should be monitored closely to ensure that there is a need to maintain good therapeutic control of their health conditions while undergoing colon hydrotherapy.

Atorvastatin (lipitor)

Atorvastatin is an oral drug that lowers the level of [cholesterol](#) in the blood. It belongs to a class of drugs referred to as [statins](#), which includes [lovastatin](#) (Mevacor), [simvastatin](#), (Zocor), [fluvastatin](#) (Lescol), and [pravastatin](#) (Pravachol).

All statins, including atorvastatin, prevent the production of cholesterol in the liver by blocking HMG-CoA reductase, an enzyme that makes cholesterol. Statins reduce total cholesterol as well as LDL cholesterol in blood. LDL cholesterol is believed to be the "bad" cholesterol that is primarily responsible for the development of coronary artery disease. Reducing LDL cholesterol levels retards progression and may even reverse coronary artery disease. Atorvastatin also reduces the concentration of triglycerides in the blood and raises the concentrations of HDL ("good") cholesterol. High blood concentrations of triglycerides also have been associated with coronary artery disease.

Atorvastatin has also been proven in clinical studies to prevent [angina](#), [stroke](#), [heart attack](#), hospitalization for [congestive heart failure](#), and revascularization procedures in individuals with coronary [heart disease](#). It can reduce the risk of myocardial infarction, stroke, angina and revascularization procedures in adults with multiple risk factors for coronary artery disease.

Problem with the use of Atorvastatin lies in its side effects. This is attributed to several factors, one of which is **DRUG INTERACTIONS**. Decreased elimination of atorvastatin could increase levels of atorvastatin in the body and increase the risk of [muscle toxicity](#) from atorvastatin. Therefore, atorvastatin should not be combined with drugs that decrease its elimination. Examples of such drugs include [erythromycin](#) (E-Mycin), [ketoconazole](#) (Nizoral), [itraconazole](#) (Sporanox), [clarithromycin](#) (Biaxin), [telithromycin](#) (Ketek), [cyclosporine](#) (Sandimmune), [nefazodone](#) (Serzone), and HIV protease inhibitors such as [indinavir](#) (Crixivan) and [ritonavir](#) (Norvir).

[Large quantities of grape fruit juice](#) (>1.2 liters daily) also will increase blood levels of atorvastatin.

[Amiodarone](#) (Cordarone), [verapamil](#) (Calan Verelan, Isoptin), cyclosporine (Sandimmune), [niacin](#) (Niacor, Niaspan, Slo-Niacin), [gemfibrozil](#) (Lopid) and fenofibrate (Tricor) also may increase the risk of muscle toxicity when combined with atorvastatin. Atorvastatin increases the effect of [warfarin](#) (Coumadin) and the blood concentration of [digoxin](#) (Lanoxin). Patients taking atorvastatin and warfarin or digoxin should be monitored carefully. [Cholestyramine](#) (Questran) decreases the absorption of atorvastatin. Atorvastatin should be given at least two hours before and at least four hours after cholestyramine.

PREGNANCY: Atorvastatin should not be taken during [pregnancy](#) because the developing fetus requires cholesterol for development, and atorvastatin reduces the production of cholesterol. Atorvastatin should only be administered to women of childbearing age if they are not likely to become pregnant.

SIDE EFFECTS: Atorvastatin is generally well-tolerated. Minor side effects include [constipation](#), [diarrhea](#), fatigue, [gas](#), [heartburn](#), and [headache](#). Atorvastatin may cause liver and muscle damage. Serious liver damage caused by statins is rare.

Methotrexate

Methotrexate is an example of an extremely toxic drug prescribed for treatment of various cancer. It is also indicated in treatment of rheumatoid arthritis and psoriasis.

There are numerous side effects such as stomatitis, nausea, malaise, fatigue, headache etc as well as infections due to immune suppression. Serious adverse reactions include: bone marrow suppression, liver, lung and kidney toxicity . Unexpected severe (sometimes fatal) bone marrow suppression, aplastic anemia and gastrointestinal toxicity have been reported with concomitant administration of methotrexate (usually in high dosage) along with some nonsteroidal anti-inflammatory drugs (NSAIDs).

It is thus important for colon hydrotherapists to be aware that any patients on methotrexate therapy should be handled with care and to ensure that their health conditions are stable before proceeding with colon hydrotherapy.

Plavix (colpidrogel)

Plavix is a drug prescribed to keep the platelets in your blood from coagulating (clotting) so as to prevent unwanted blood clots that can occur with certain heart or blood vessel conditions.

Plavix is used to prevent blood clots after a recent heart attack or stroke, and in people with certain disorders of the heart or blood vessels.

Because of this drug action, Plavix may cause bleeding problem even from a minor injury. It can present as bleeding within the digestive tract – stools are black and/or vomit is coffee ground color. These are signs of bleeding in your digestive tract.

Avoid drinking alcohol while taking Plavix. Alcohol may increase the risk of bleeding in your stomach or intestines.

Clients intending to undergo any type of surgery or dental work should inform their surgeon or dentist about the use of Plavix. They will need to stop using the medicine for at least 5 days before having surgery, to prevent excessive bleeding.

While taking Plavix, avoid taking aspirin or other NSAIDs (non-steroidal anti-inflammatory drugs) unless under doctor's advice. NSAIDs include ibuprofen (Motrin, Advil), naproxen (Aleve, Naprosyn), diclofenac (Voltaren), diflunisal (Dolobid), etodolac (Lodine), flurbiprofen (Ansaid), indomethacin (Indocin), ketoprofen (Orudis), ketorolac (Toradol), mefenamic acid (Ponstel), meloxicam (Mobic), nabumetone (Relafen), piroxicam (Feldene), and others.

If clients are taking Plavix (clopidogrel), be aware of the increase risk of bleeding in such clients and advise them to seek treatment accordingly, if there are warning signs of any bleeding problems.

Warfarin (coumadin)

Warfarin (coumadin) is a drug prescribed to prevent clotting especially in cases at risk of suffering from thrombosis or high risk of embolism. These can be cases of strokes, heart disease, peripheral arterial disorders or atrial fibrillation.

There may also be side effects such as nausea, abdominal discomfort and hypersensitivity to warfarin.

The importance though is the risk of haemorrhage in such cases during any procedure or injury. Due to the possibility of bleeding from haemorrhoids or problem of rectal bleed during colon hydrotherapy session, it is important for a colon hydrotherapist to be aware of this problem in patients taking warfarin.

Digoxin

Digoxin is a very useful drug in the treatment of various heart conditions. Derived from the foxglove plant, its medicinal properties have been documented since the late 18th century. Digoxin is recommended for use in treatment of heart problems such as atrial fibrillation, congestive heart failure (CHF) etc.

In spite of its usefulness, one problem with digoxin lies in its narrow therapeutic window leading to **risk of drug toxicity**. (ie. a very small range of dosage before it manifests toxicity which can be serious and fatal).

Approximately 0.4% of all hospital admissions are related to digitalis toxicity. Of people in nursing homes, 10 to 18% develop this toxicity. According to a large study published in 1990, definite digoxin toxicity occurred in 0.8% of patients with heart failure treated with digoxin.

One of the most common precipitating cause of digitalis intoxication is the lack of potassium stores in the body. This occurs often in patients with heart failure as a result of diuretic therapy and secondary hyperaldosteronism.

Another cause is drug interactions. A number of drugs are known to potentiate digoxin toxicity. These include the following:

- Quinidine
- Erythromycin
- Verapamil, diltiazem, nifedipine
- Captopril
- Anticholinergic drugs
- Ibuprofen
- Amiodarone

Therapist managing clients who have heart disease or atrial fibrillation, should take a detailed drug history and advise clients to seek medical attention.

Lasix (Frusemide)

Lasix is a very useful drug to prevent the body from absorbing too much water.

It is generally prescribed for congestive heart failure, liver disease, or kidney disorders.

Side effects of Lasix may include:

- dry mouth, thirst, nausea, vomiting;
- feeling weak, drowsy, restless, or light-headed;
- fast or uneven heartbeat;
- muscle pain or weakness;
- urinating less than usual or not at all;
- easy bruising or bleeding, unusual weakness;
- a red, blistering, peeling skin rash;
- hearing loss; or
- stomach pain, low fever, loss of appetite, dark urine, clay-colored stools, jaundice (yellowing of the skin or eyes).

Clients on Lasix should be referred to the referring Health Care practitioner prior to the session.

Carvedilol (Coreg)

Carvedilol ([Coreg](#)) is a prescription medicine prescribed commonly for treatment of hypertension and congestive heart failure. It belongs to a class of drugs known as the [beta blockers](#).

There are a number of known side effects. These include :

- Dizziness
- Low [blood pressure](#)
- [Diarrhea](#)
- High blood sugar
- Increase in weight
- Slow heart rate
- Nausea
- [Insomnia](#)
- Drop in blood pressure when standing from either a sitting or lying-down position.

Due to the possibility of drug interaction with a large number of drugs – including heart medication, anti-depressants, NSAIDs etc, a careful drug history must also be taken from clients.