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## Managing Over-the-Counter Medications

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As a pharmacist who works with pulmonary hypertension patients, I am often asked which over-the-counter (OTC) medications are safe for patients to take. Over-the-counter medications should be used cautiously in patients with pulmonary hypertension. Many of these medications have the potential to affect the heart and lungs adversely or to interact with pulmonary hypertension medications.

Any drug that is contraindicated in patients with high blood pressure should be avoided in patients with pulmonary hypertension. Decongestants cause vasoconstriction (narrowing) of the blood vessels, which can increase blood pressure and heart rate, cause palpitations and may worsen pulmonary hypertension symptoms. Many cold/flu products on the market are multi-ingredient preparations, so reading the label for a full list of ingredients is important. A common oral decongestant is pseudoephedrine (Sudafed, Neo-Citran). Another popular decongestant, phenylephrine, has been found ineffective in reducing symptoms of nasal congestion when taken orally. Topical nasal decongestants are generally considered safer for those who want to use a decongestant but for no more than three days, as they may worsen congestion if used long-term. Some examples of nasal decongestants are oxymetazoline (Dristan, Drixoral), phenylephrine (Neo-synephrine), or xylometazoline (Otrivin). The best alternative to decongestants is nasal saline rinses, either through a neti pot or spray bottle.

Products that contain antihistamines such as diphenhydramine (Benadryl) or chlorpheniramine (Chlor-tripolon) and the non-drowsy type loratadine (Claritin), cetirizine (Reactine), desloratadine (Aerius) and fexofenadine (Allegra) can be used safely to treat allergies and hay fever symptoms, as long as they do not contain a decongestant (look for a D at the end of the product name, eg) Claritin D, Aerius Dor Allegra D).

The non-steroidal anti-inflammatory drugs (NSAIDs) are a class of medications used to treat a variety of conditions and are available both by prescription and OTC. Ibuprofen (Motrin, Advil), ASA (Aspirin, Anacin) and naproxen (Aleve) are a few examples of OTC available in Canada. These ingredients are typically used to relieve pain and



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inflammation but are often found in cold or sinus medications. NSAIDs may promote sodium and water retention and lead to increased blood pressure, swelling and/or exacerbation of congestive heart failure. They can also worsen kidney function in those people with chronic kidney disease. Furthermore, this class of medications may increase the risk of bleeding when taken concurrently with warfarin (Coumadin) or the newer anticoagulants rivaroxaban (Xarelto), apixaban (Eliquis) and dabigatran (Pradaxa).

Acetaminophen (Tylenol) is another analgesic unrelated to the NSAID family. It appears to be safer in patients taking warfarin, although larger doses have been found to interact with warfarin and increase the risk of bleeding. Large doses of acetaminophen also have the potential to cause liver damage. It is currently not known whether acetaminophen taken in combination with bosentan (Tracleer), ambrisentan (Volibris) or macitentan (Opsumit) could increase the risk of liver damage in patients with pulmonary hypertension.

Caffeine is a stimulant which is sometimes found in a variety of OTC medications for headaches or menstrual cramps (Midol, Excedrin). Over-the-counter medications containing caffeine should be avoided, as in large doses, they may increase blood pressure or cause palpitations or an abnormal heart rhythm.

Ingredients that possess stimulant-like properties have also been found in many herbal products (Ma huang). Unfortunately, there is often a lack of scientific data regarding the safety and efficacy of most herbal products. Herbal products have adverse effects similar to conventional medications and may adversely affect the heart, lungs or liver. Many herbal products have been found to interact with medications commonly used in pulmonary hypertension, such as warfarin, digoxin, or calcium channel blockers (nifedipine, diltiazem). Even though a product is touted as natural, it should not be considered safe. Herbal products should, therefore, be avoided unless approved by your pulmonary hypertension specialist.

When choosing an OTC product, always be sure to read the product label, paying special attention to the active ingredient section. Selecting an OTC medication can be confusing. Familiar brands often market multiple products, each potentially containing different ingredients. For example, Robitussin OM contains the active ingredients guaifenesin and dextromethorphan, while Robitussin Cough and Cold additionally contains pseudoephedrine. The latter product, therefore, should be avoided in patients with pulmonary hypertension. If you are unsure which products are safe, be sure to check with your pulmonary hypertension team. Your pharmacist will also be an excellent resource to help navigate the often overwhelming choices in a pharmacy's OTC section.

While this article addresses the safety of OTC medication in pulmonary hypertension, it is important to remember other individual disease considerations. Certain OTC



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medications should be avoided in conditions such as diabetes, glaucoma or asthma and may interact with other classes of medications. It is also important to consider individual dietary considerations. Patients on a low-salt diet will want to consider the sodium content of the chosen product. A sodium restricted diet (less than 2400 mg/day) is generally recommended for all pulmonary hypertension patients, while other patients may be on a more severely restricted diet. Likewise, individuals with diabetes should consider the sugar content when choosing an OTC product.

In conclusion, caution should be used when choosing an OTC product for a patient with pulmonary hypertension. Certain drug classes, such as decongestants and NSAIDs, as well as herbal products, may cause harm and generally should be avoided. Also, individual disease and dietary considerations should be taken into account. Careful reading of labels is advised for a safe selection of products; when in doubt, consult with your healthcare provider.