



Warding off winter wheezing

Asthma can worsen
in winter's cold dry outdoor air and arid
indoor air. Everyday control is essential **Sheldon Gordon**

When the weather turns cold in the northern British Columbia city of Prince George — and it does turn cold — Mary Lu Spagrud and her eight-year-old son, Liam, make sure to don winter clothing, including homemade face masks. “There’s a bit of ‘Oh heck! Here we go again,’” she says. The Spagruds have good reason to be wary of winter. They both suffer from exercise-induced asthma, and it tends to flare up in winter — when they leave their warm house and inhale the cold dry winter air. “There used to be a searing, burning pain throughout my respiratory system, and

I had to struggle to be able to breathe,” Mary Lu recalls.

With the help of appropriate medications, mother and son are able to prevent the kind of full-blown asthma attacks that, in the past, required emergency-room treatment. Mary Lu, who has shed 125 pounds in the past two and a half years, is even able to play team sports now, a sharp contrast with her childhood, when simply riding her bicycle across the front yard would bring her to her knees. Yet both she and her son know they’re each likely to experience at least one bad chest infection during the winter — the result of their compromised respiratory systems.



BY THE NUMBERS

Mary Lu and Liam are among the estimated three million Canadians — 7% to 10% of the population — who have been diagnosed with asthma. Although this is a controllable disease, 60% of Canadians with asthma do not have their symptoms in check. Every year in this country, asthma attacks account for 146,000 emergency-room visits, and 500 adults and 20 children die from them (though 80% of those deaths are preventable).

SEVERITY AND FLARE-UPS

The severity of an asthma attack is not the same as the severity of the asthma overall, says allergist Dr. Mark Greenwald, an assistant professor of medicine at the University of Toronto and chair of the Asthma Society of Canada's scientific and medical committee. "You can have mild, moderate or severe asthmatics, and all of them can experience severe attacks. How much medication or intervention is needed to bring the attack under control reflects the severity of the asthma."

While the incidence of asthma flare-ups is no greater in the winter than in, say, the autumn, the severity of the flare-ups can be greater in the cold months. "Very cold dry air,

even when inhaled outdoors by a non-asthmatic individual, can cause a tightness in the chest," says Greenwald. "The asthmatic's airways, which are hyper-reactive, respond more easily to that type of irritant."

KIDS AND ASTHMA

This condition can be especially hard on children: chronic asthma is the most frequent long-term children's disease. It affects at least 12% of Canadian kids (versus 5% of adults). It is also the number one reason for emergency-room visits for children and causes 25% of absences from school. Encouragingly, though, one-half of children with asthma will outgrow it, and the milder it is, the better the odds of leaving it behind. Proper control can allow children to enjoy the wonderful world of outdoor winter activities such as skating, sledding and snowball fights.

ASTHMA'S EFFECTS

Asthma is a chronic respiratory condition that affects the network of smaller and smaller passages that carry air in and out of the lungs. When an asthmatic person comes into contact with something that irritates his or her airways (a trigger), the muscles around the bronchial tubes tighten and the airways become narrower. Their lining becomes inflamed and begins to swell. Sometimes thick sticky mucus or phlegm is produced in the bronchial tubes, further narrowing the airways. The result is wheezing and difficulty breathing, which can be life-threatening.



An asthmatic person may find that different irritants trigger a reaction at different times. Common triggers of asthma symptoms include pollen, pet dander, a cold or the flu, dust, mould, cigarette smoke, non-steroidal anti-inflammatory drugs, air pollution, exercise, certain foods and, yes, cold air (which is why some asthmatics experience symptoms only in winter).

Scientists believe that people who develop asthma have been born with a predisposition to it. But the condition may not emerge until they have been exposed to some asthma irritants. Greenwald suggests that asthmatics could do much more to limit their exposure to irritants through proper environmental management. For example, dust mites are present in every home, and allergists recommend that pillows and mattresses have mite-resistant encasings. “But 90% of the encasings sold in Canada are not mite-proof,” he notes.

MANAGING ASTHMA

While no cure for asthma exists, today’s medications can reduce the occurrence of symptoms.

- Quick-relief rescue inhalers provide relief from symptoms within minutes.
- Maintenance inhalers, taken daily, work to prevent symptoms and attacks.

As the name suggests, quick-relief or “rescue” inhalers stop asthma symptoms before they get worse. Most quick-relief inhalers are short-acting bronchodilators — they loosen the muscles around the airways so that breathing becomes easier.

Maintenance inhalers take different forms and are called controller medications, anti-inflammatories, long-acting bronchodilators or inhaled corticosteroids.

When used on a daily basis, maintenance puffers help to prevent symptoms and flare-ups. They do so by alleviating underlying inflammation, thereby preventing, reducing or reversing swelling in the lungs and airways. They also help curb mucus production, so that the airways remain clearer.

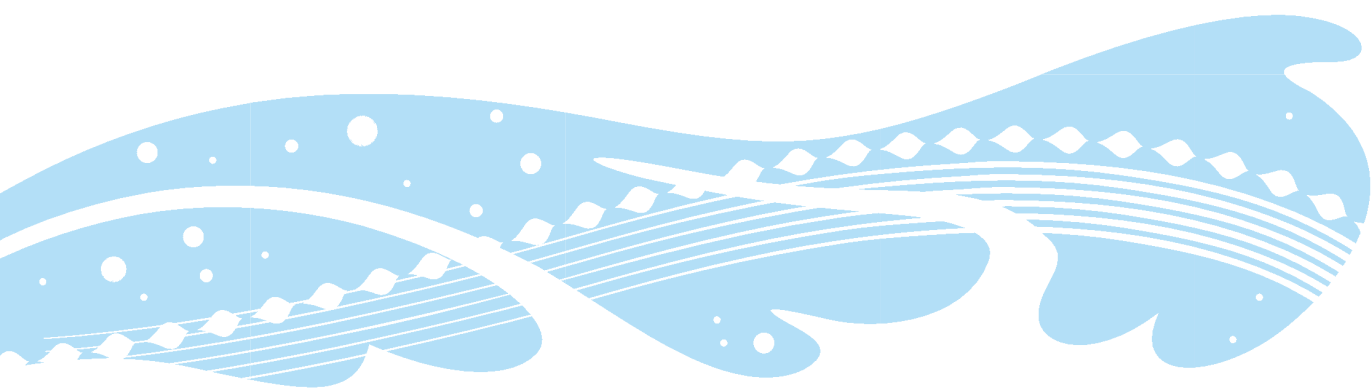
Over time, maintenance inhalers can reduce the airways’ sensitivity to asthma triggers. A maintenance puffer can’t do the job of a rescue puffer in quelling sudden attacks, but regular daily use can lessen the number of attacks. Thus, many asthmatics take both types of medicine.

Few new medications for asthma are in the pipeline, says Dr. Pierre Ernst, a respirologist at Jewish General Hospital in Montreal. “We already have very good asthma medications. The problem is that they are not used properly.” Existing medications can control asthma adequately and allow normal lives for 95% of asthmatics. “Yet less than half of asthmatics are properly controlled. The gap is due to the poor way that asthma is managed by the patients and their doctors,” he says.

NON-CONVENTIONAL THERAPY

About half of asthma patients use some form of non-conventional therapy. The effectiveness of most of these therapies is unproven. One, however, the Buteyko method — a series of breathing exercises that focus on control of hyperventilation through nasal breathing, breath holding and relaxation — has been shown in controlled trials to significantly reduce the need for medications. According to the 2009 updated *British Guidelines for the Management of Asthma*, the Buteyko technique may help to control symptoms, but improvement takes time and commitment and requires daily exercises over a period of weeks or months.

For too many asthmatics, however, a sense of commitment is exactly what seems to be lacking. When their symptoms lessen or



disappear, they stop taking their controller medications. This permits the underlying inflammation to return, ensuring further asthma flare-ups. “Too often, people go from crisis to crisis,” says Greenwald. “They fail to see asthma as a chronic illness. They should be working on it on a regular basis.”

That’s what Mary Lu has been doing, and the effort has paid off for her. She uses

Symbicort — a combination of a corticosteroid and a bronchodilator — as a preventive medication. “The biggest thing for me is taking my inhaler before I exercise and before I go outdoors in the winter,” she says. “As a child, I had to be rushed to the hospital several times, but as an adult — knock on wood — I’ve had no asthma attacks of that severity.”

For more information, check out the website of the Asthma Society of Canada at www.asthma.ca.



What does well-controlled asthma look like?

- You rarely experience symptoms.
- You sleep through the night.
- You exercise, even in cold air, without getting symptoms.
- You need to relieve your symptoms with a rescue bronchodilator no more than four times a week (not including protective use before exercise).
- You never miss a day of work or school because of asthma.
- You don’t need to go to the emergency room.
- You have normal breathing tests.

Cold-weather exercise

If, like Mary Lu and Liam, you wheeze during exercise in the cold air, check out these tips.

- Use your reliever medication 20 minutes before exercising.
- Consider less strenuous forms of outdoor exercise (a brisk walk instead of a jog). Or choose an indoor activity such as basketball or, even better, swimming — a moist environment is easier on the airways.
- Make a point of breathing through your nose so the air gets warmed and moistened before entering your lungs.
- If you need to breathe through your mouth on a cold day, wear a scarf or a special cold-weather mask.
- Ask your doctor if you need an increased dose of your preventive anti-inflammatory medication for winter.
- Carry your inhaler close to your body as warm medication gets into the respiratory system faster.