LVRS Benefits for COPD

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Is Lung Volume Reduction Surgery for You?

COPD forces you to make lifestyle changes in order control the progression of the disease, but when those changes aren't enough, you may look to surgical intervention. Lung Volume Reduction Surgery (LVRS) is a relatively new procedure used to treat some cases of emphysema, and although it has been shown to improve survival rates and quality of life, it's not for everyone. Learn the criteria, benefits and risks of the surgery to help you decide if it's right for you and your COPD symptoms.

What Lung Volume Reduction Surgery Can Do

It may seem counterintuitive to remove lung tissue when you're already have trouble breathing, but lung reduction surgery can holds promising results for patients with late-stage emphysema. The purpose of the operation is to remove the irreversibly damaged tissue (up to 25% of each lung) that traps stale air, hinders the diaphragm and crowds the healthier areas of the lung.

In the most successful cases, LVRS can bring a variety of functional benefits, including:

- **Improved lung function**. By removing the paralyzed sections of tissue, the rest of the lung has space to move and less stale air to interfere with normal inhalation and exhalation.
- **More energy**. The more efficiently the lungs can move oxygen into the blood, the more energetic you will become. You may find that your capacity for exercise skyrockets after recovery.
- **Better use of oxygen**. Since the reduced lungs can more easily expand in the chest, they can take in more oxygen with each breath. In many cases, patients have been able to give up their supplemental oxygen altogether.

No benefits are guaranteed, but your surgeon and medical team will be able to determine how much you can expect your breathing to improve based on the extent and the particular characteristics of your emphysema.

Who Will Benefit from LVRS

The best candidates for LVRS have specific symptoms that will likely respond well to the procedure without risking further damage or complication. You have a better chance of benefitting from lung volume reduction surgery if you have:

- Emphysema that is localized
- Emphysema that is in the upper lobe of the lung
- Dramatically enlarged lungs
- No other medical issues that could complicate surgery
- Remained smoke-free for at least 4 months

Unfortunately, emphysema that has spread uniformly throughout the lungs or happens to be concentrated in the lower sections is not easy to treat with surgery. Your stage of emphysema will also come into play; patients with good exercise capacity are likely not in an advanced stage, and would probably not be considered for such a drastic procedure.

Risks to Consider

If you've been cleared as a candidate for surgery, you'll have to think about what it might mean for your body and your lifestyle. Firstly, there are the risks to consider. Many of these risks are common for any type of major surgery; there is an increased chance of blood clots (which could cause a stroke or heart attack), and a risk of internal bleeding (hemorrhage). After LVRS, 40% of patients will experience some degree of prolonged air leakage, and about 15% of patients contract pneumonia after the surgery.

In order to improve your chances of a full recovery, you must strengthen your lungs and chest muscles with specific pulmonary rehabilitation exercises for 6 to 10 weeks before surgery. Physical therapy is also an important part of your post-surgery treatment, and you'll begin exercises to keep your body in good shape and keep your new oxygen-rich lungs working efficiently.