

Q and A: Is surgery best for an acoustic neuroma?

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I was diagnosed with an acoustic neuroma last year after I went to the doctor due to more frequent headaches. I read that surgery often is needed for these tumors, but my physician said I did not need to be treated. He suggested we reevaluate after imaging in a few months. Why would I not need to be treated?

ANSWER: An acoustic neuroma, more accurately called a vestibular schwannoma, is a relatively uncommon and [benign tumor](#) that grows on the balance, or vestibular, [nerve](#). This nerve twines together with the hearing nerve and runs from your inner ear to your brain.

The tumor usually is diagnosed with imaging, such as an MRI, that is often performed because a patient noticed hearing loss in one ear. With improvements in technology and imaging availability, tumors are being diagnosed when they are smaller and causing fewer, if any, symptoms.

Increasingly, acoustic neuromas are being discovered as incidental findings when people undergo an MRI for unrelated reasons, such as

chronic headache, multiple sclerosis or even during surveillance imaging for another unrelated tumor.

Most acoustic neuromas grow slowly, although the [growth rate](#) differs for each person and may vary from year to year. Some [acoustic neuromas](#) stop growing, and a few even spontaneously get smaller. The tumor does not invade the brain, but it may push against it as it enlarges.

For many years, [health care professionals](#) thought [surgical removal](#) was the [best treatment](#) for everybody. But today, only some patients with acoustic neuroma will require surgery.

Beginning in the mid-1980s, focused radiation treatments, such as gamma knife radiosurgery, were shown to be safe and effective for certain patients. Other patients, however, who did not undergo surgery or radiation right away, had follow-up MRI scans that showed their tumor stopped growing without any treatment. Increasingly, health care professionals are concluding that, in some cases, no treatment may be just as good as or better in the long run than active intervention.

Symptoms of an acoustic neuroma typically include loss of hearing in one ear; ringing in the ear, or tinnitus; and unsteadiness while walking. Occasionally, facial numbness or tingling may occur. Rarely, large tumors may press on your brainstem, threatening vital functions.

A tumor can prevent the normal flow of fluid between your brain and spinal cord so that fluid builds up in your head. This condition is called hydrocephalus.

Treatment varies depending on the size and growth of the acoustic neuroma, symptoms, and your personal preferences.

The most common treatment options are:

- **Monitoring:** If you have a small acoustic neuroma that isn't growing or is growing slowly, and causes few or no signs or symptoms, your health care professional may decide to monitor it. It sounds like this is what has been recommended for your situation. Recent studies indicate that more than half of small tumors don't grow after initial diagnosis, and a small percentage even shrink. Monitoring involves regular imaging and hearing tests, usually every six to 12 months at first. The main risk of monitoring is tumor growth and progressive hearing loss.
- **Stereotactic radiosurgery:** This approach may be used if the acoustic neuroma is growing, with the goal of preventing further tumor growth. With [stereotactic radiosurgery](#), a highly precise single dose of radiation is delivered to the tumor. The procedure's success rate at stopping tumor growth is usually greater than 90%. It may increase the amount of [hearing loss](#) in the affected ear, but risk of creating new symptoms like facial weakness should be low. Radiation is generally not used for large tumors, and many health care professionals hesitate to use radiation in younger patients.
- **Open surgery:** Surgical removal typically is recommended when the tumor is large or growing rapidly. This is a complex procedure, often performed by a team of at least two surgeons working together. Surgery seeks to remove as much of the tumor as possible while preserving the function of important nearby nerves and brain structures. If it can be removed without injuring the inner ear or hearing nerve, your remaining hearing may be preserved. Surgery risks include damage to the facial nerve, which is important for facial expression and closing your eye. Most patients find that their balance temporarily worsens after [surgery](#), but it improves again over time. In general, the larger the [tumor](#), the greater the chances of complications or of your [hearing](#) or facial nerve being affected.

Research in peripheral nerve tumors is ongoing in general and to compare the three treatment strategies. But based on long-term data, there appears to be surprisingly little difference in outcome no matter which [treatment](#) is chosen for smaller tumors. Talk to your health care team to make sure you are being monitored appropriately for your situation.

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