

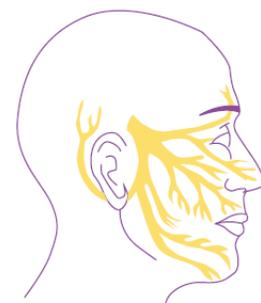
August 2022 Newsletter



What is Trigeminal Neuralgia?

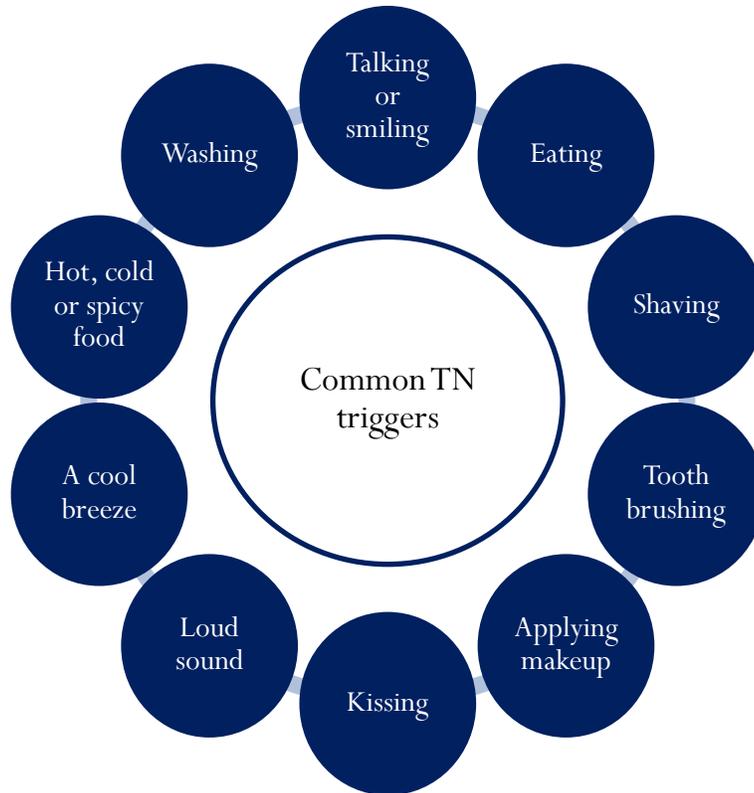
[More than half](#) of people living with MS suffer from chronic pain. Trigeminal neuralgia (TN) is facial pain that is associated with irritation or damage to the trigeminal nerve. TN is one of the most common pain syndromes in individuals with MS and often has a profound impact on quality of life.

The [trigeminal nerve](#) is one of twelve pairs of cranial nerves that provide communication between the brain and the face, head and neck. One trigeminal nerve runs along each side of the face and splits into three branches: the upper stimulates the scalp and the forehead, the middle reaches the nose, cheek and upper jaw, and the lower supplies sensation to the lower jaw and mouth. TN can affect one or more of these branches. The location of the pain depends on which one(s) are affected.



As is often the case with MS, TN manifests itself differently in every individual. It can be excruciatingly painful. Some feel a sudden sharp pain like an electric shock, but for others it may be a more long-lasting aching or burning sensation. These feelings usually occur on one side of the face (unilateral). In rare cases they occur on both sides of the face

(bilateral), but not at the same time. These attacks can happen frequently, lasting anywhere from a few seconds to several minutes. In severe cases they may last an hour or longer. Bouts of pain are often triggered by everyday activities:



Episodes of TN often end with uncontrollable facial twitching, which is why the disorder is also known as tic douloureux. Some people feel warning signs like tingling or achiness prior to the onset of pain, but for most it arrives without warning. Typically, attacks come in waves and then go into remission for months or even years. They often worsen over time, with fewer and shorter pain-free periods. For some individuals, the pain may become continuous.

There is no specific test for TN, a diagnosis is usually based on an individual's description of their pain, including any triggers that may bring it on. A physical or neurological exam may also be done to better understand where the pain is located. Magnetic resonance imaging (MRI) is used to visualize and evaluate the trigeminal nerve.



There are two types of TN. **Primary TN** is typically caused by compression of the trigeminal nerve by a healthy blood vessel at the base of the brain where it meets the spinal cord. The resulting pressure on the nerve causes it to misfire. **Secondary TN** is caused by other factors, such as nerve compression from a tumor or other mass, nerve irritation from sinus surgery or dental problems, injury or trauma to the face, or other health conditions, like MS. In people with MS, TN is most often caused by damage to the myelin sheath around the trigeminal nerve.



According to the [National Institutes of Health](#), TN occurs most often in people over age 50, although it can occur at any age, including infancy. MS is most often the cause of TN in young adults. As is the case with MS, TN is more common in women than in men. The incidence of new cases in the general population is approximately 12 per 100,000 people per year (.012%). [Researchers](#) in Iran recently determined the estimated prevalence of TN among people with MS is 3.4%, which is substantially higher. A [2017 study](#) suggests that TN may be an early symptom of MS. Results show that TN diagnosis precedes MS diagnosis in 15% of individuals.

A number of medications are used to manage the pain associated with TN. Common analgesics like ibuprofen and aspirin typically don't help. [Carbamazepine](#) (Tegretol) and other [anticonvulsants](#) are often used and are generally most effective in treating primary TN. These drugs act by blocking the trigeminal nerve from firing. Another commonly prescribed medication is [baclofen](#). It relaxes any tight muscles that may be contributing to facial pain. Anticonvulsant medications and baclofen are sometimes used together. While the exact mechanism by which they work is unknown, [tricyclic antidepressants](#) such as [amitriptyline](#) or [nortriptyline](#) also help some individuals with chronic pain. When used for this purpose, these drugs are usually given in doses much lower than those used for depression.



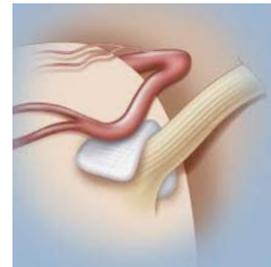
If medication fails to relieve pain or produces intolerable side effects, several surgical options are available. The potential benefits and risks of these approaches should be

discussed with one's healthcare provider. The following [percutaneous procedures](#) are used to treat TN. They target the [Gasserian ganglion](#), which is where the three main branches of the trigeminal nerve join together. These treatments deliberately injure the nerve in order to disrupt any pain signals traveling along it.

Outpatient procedures to treat TN:

Stereotactic radiosurgery	<ul style="list-style-type: none">• High-dose radiation is directed at the Gasserian ganglion causing a lesion on the nerve, which blocks pain signals.
Glycerol rhizotomy	<ul style="list-style-type: none">• Glycerol is injected around the Gasserian ganglion. This numbs the trigeminal nerve and helps to reduce pain.
Balloon compression	<ul style="list-style-type: none">• A tiny balloon is inserted via a thin tube and inflated around the Gasserian ganglion to squeeze it.
Botox injections	<ul style="list-style-type: none">• Botulinum toxin injections around the Gasserian ganglion are being studied as a treatment for TN in MS.

[Microvascular decompression](#) (MVD) is a more major neurosurgical procedure that is used to treat primary TN. It is done under general anesthesia and involves opening the skull to expose the nerve at the base of the brainstem. A tiny Teflon pad is then inserted between the offending blood vessel and the nerve. This pad isolates the nerve from the pulsating effect and pressure of the blood vessel. While it has the potential to provide long-lasting relief, MVD also carries significantly more risk than percutaneous procedures. It's important to note that TN in people with MS is generally caused by demyelination and would therefore not be improved by MVD.



Some individuals with MS turn to [alternative medicine](#) to help manage facial pain. These methods are often used in combination with standard treatments. Dealing with TN can be very draining and lead to lack of sleep, isolation and depression. Some people find that



[yoga](#), [tai chi](#), or [meditation](#) promote a sense of inner peace and wellbeing. A [recent review](#) found that [acupuncture](#) is an effective and safe treatment for primary TN. Investigators state that additional studies should be conducted to verify these findings. In addition, a [2019 study](#) concluded that acupuncture improves the cognitive function and quality of life for

those living with TN. Evidence supporting the effectiveness of other alternative treatments for facial pain is limited. An [analysis](#) done in the 1950's suggested that large doses of vitamin B12 were used to successfully treat TN. A [2007 study](#) concluded that [acupoint injection](#) of vitamin B12 has a better therapeutic effect than that of oral carbamazepine. [Research](#) also shows that [transcutaneous electrical nerve stimulation](#) (TENS) is an effective, easy to use treatment for TN not responding to conventional treatment that has few side effects. A [2017 study](#) suggests that St. John's Wort may be a promising therapeutic option for TN, however these findings were based on a single case study. More research is needed to solidly support the use of St. John's Wort for this purpose.

TN is a painful condition that currently has no cure however there are ways manage it. Many people find relief from TN pain by applying heat to the affected area. It may be useful to keep a symptom diary to see if there is any pattern to TN attacks or any triggers that set them off. Once triggers are identified, steps can be taken to avoid them, if possible. Individuals with TN may have problems eating and with other activities of daily living. There are medical professionals and other resources that can help. For example, an occupational therapist may be able to provide suggestions and equipment to help with daily tasks. A psychologist or other mental health professional may be able to provide encouragement in staying positive. Support groups can help one learn more about new treatments and different ways to cope. It's important for people with MS to speak with their neurologist about any pain they may be experiencing. He or she may be able to help find the right specialist and treatment option to help cope with the pain and effectively manage symptoms.

