

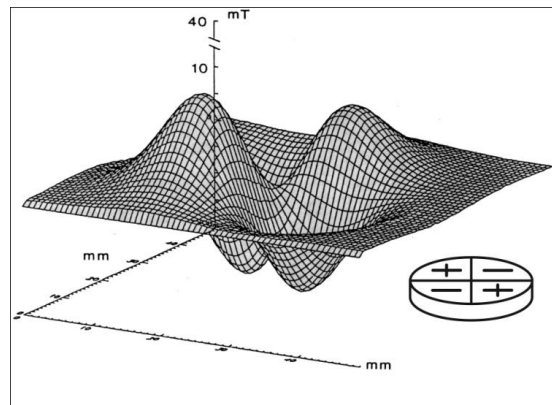
Q magnet Therapy and Trigeminal Neuralgia:

What makes Q magnets different?

A Q magnet is a quadrapolar static magnet with four alternating poles or quadrants within the one magnetic body. They have a magnetic stainless steel flux plate on top to drive the field deeper into the body and insulate the strength of the field coming away from the body.

Q magnets are listed with the TGA as a Class I Medical Device ARTG 13223 used for both acute and chronic pain.

Image 1: Computer generated rated magnetic field map of the Quadrapolar array. [Static Magnetic Fields for the treatment of Pain. McLean MJ et al.](#)



Q magnets are a world first in that they combine an extremely strong magnetic flux density with a steep magnetic field gradient within a single magnetic body.

The main applications for Q magnet therapy are acute and chronic pain.



The image to the left shows the effects of Q magnets on a haematoma or bruise after one day.

Teams like the Super 14's Western Force and Queensland Reds and the AFL's Brisbane Lions and Fremantle Dockers regularly use Q magnets for soft tissue injuries and haematomas.

Observations such as these show that the physiologic effects of Q magnet therapy cannot be simply put down to placebo.

How do Q magnets work?

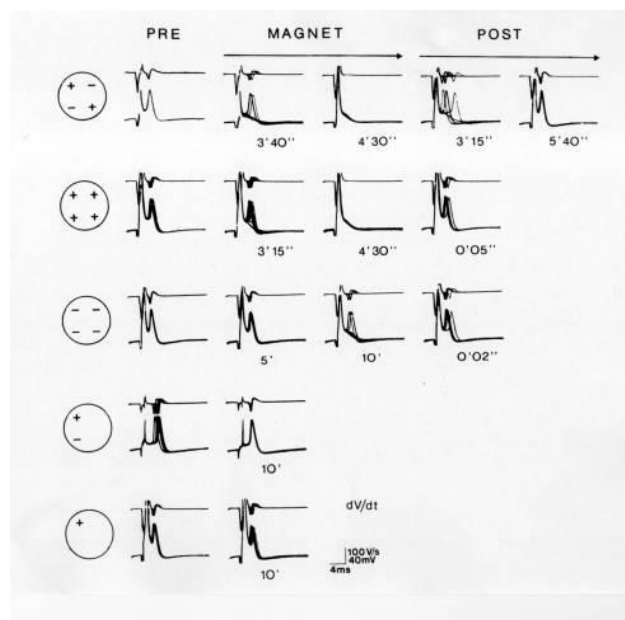
10 years of research by neurologists at Vanderbilt Medical University showed that the determining factor in the therapeutic value of static magnets is the magnetic field gradient and not the field strength.

This is in contrast to the common bipolar magnets whose effectiveness is the subject of much debate. The field from bipolar magnets is spatially uniform and there is negligible field gradient, so while they can have a strong magnetic field, what they lack is a field gradient.

While the precise mechanism of action is unknown, studies have shown that the most biologically effective region is located at the boundary between adjacent poles ([Engstrom et al., 2002](#); [McLean et al., 2002](#)), where the field gradient is steepest.

The research suggests that the most likely mechanism of action is that the steep field gradients generated by the Quadrapolar magnetic field is altering nerve excitability as a result of changes in membrane permeability to sodium and calcium ions ([McLean et al., 1995](#); [Cavopol et al., 1995](#)). The quadrapolar array only works on abnormally firing action potentials (the nerves pain pulsing messaging system) so it is imperative to find the correct placement where these faulty action potentials are generated.

Image 2: Comparison of five different magnetic field arrays on dorsal root ganglion neuron. McLean, M.J., Holcomb, R.R., Wamil, A.W., Pickett, J.D.: Effect of steady magnetic fields on action potentials and sodium currents of sensory neurons in vitro. [Environmental Medicine, 8: 36-45, 1991](#).



The research also showed that the Quadrapolar array works most effectively on unmyelinated C-fibres. Often times TN onset comes after the demyelination of the trigeminal nerve, which is particularly common with MS sufferers. This is in contrast with TENS which works more effectively on the myelinated A-Delta nerve fibres.

Image 3 shows the original design by neurologist Dr Robert Holcomb with four bipolar magnets arranged into a quadrapolar array.

Image 3: Original design

Q magnet

Q magnet through magnet viewer



The steep field gradient exists between the four quadrants. This can be seen as the crossed hair lines in the Q magnet seen through the magnet viewer.

Correct placement for Trigeminal Neuralgia:

For chronic pain it's important to treat the origin of the pain and follow the dermatomes back to the nerve root. Due to communication through propriospinal intersegmental neurons, often devices will need to be placed on multiple levels.

The trigeminal nerve inserts into the spine at Level C1 which can be accessed at the base of the skull in the hairline.

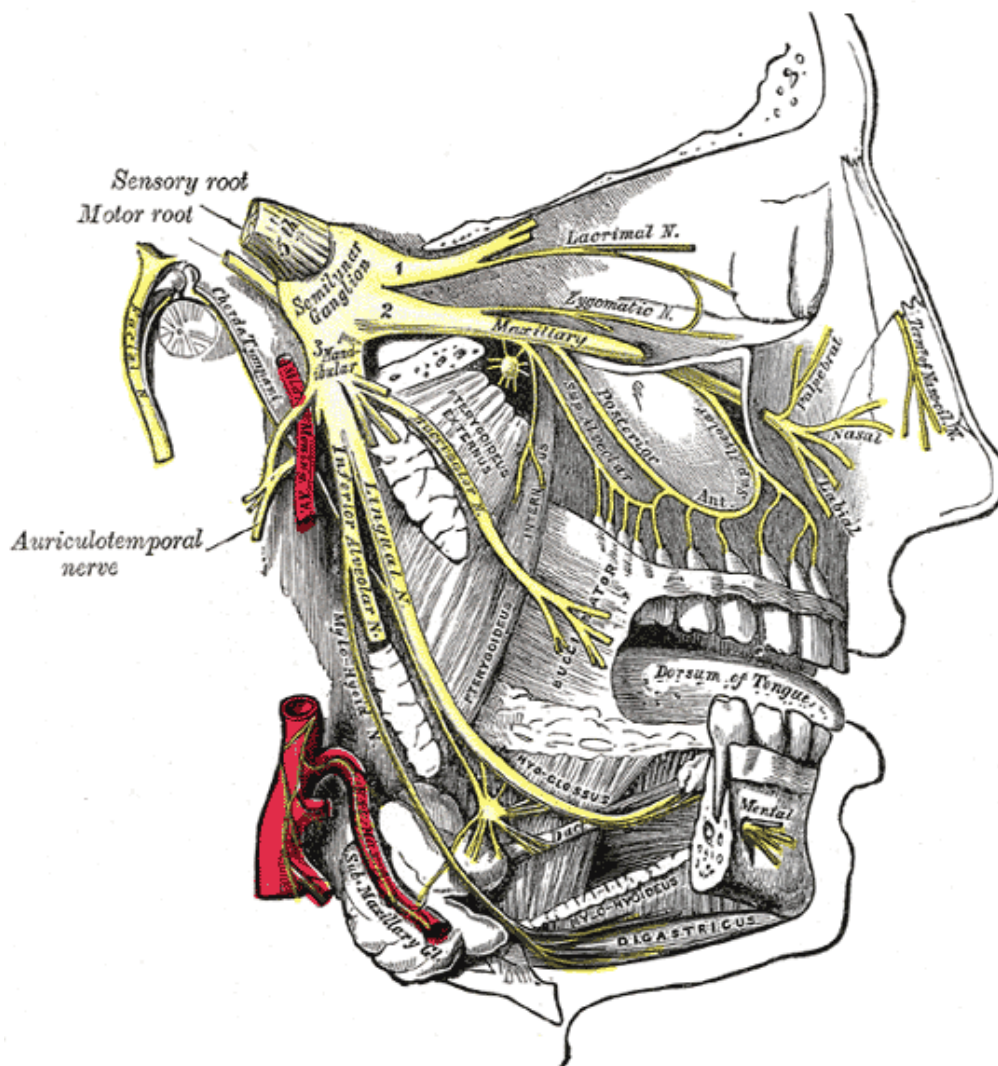
The two main placements for Q magnet therapy for TN are:

1. Over the TMJ which provides the best access to the Trigeminal Nerve
2. Over the occiput where the Trigeminal Nerve insets into the dorsal column.

Response to treatment:

The response to treatment is not consistent, but this is not uncommon with most treatments for chronic pain. On occasions the pain has reduced over time, sometimes minutes, other times hours or days. While at times it was only necessary to wear the devices for a few days and the pain did not return.

Ideally if the Q magnets work, it would be ideal to wear them at night while sleeping and not during the day. More research needs to be done to get a better overall picture of Q magnet therapy treatment times and responses. We appreciate any and all feedback provided to us.



Dr Mark Thibert, M.D. (Plastic Surgeon)

Although I, along with many, cannot be certain as to the precise biological explanation surrounding the physiology of Q magnet action, it is irrefutable in my case that they were, nevertheless, highly effective.

For now, we have theories, like so many demonstrable events in nature. These answers may come with further research. Until then, Q magnets are a viable option for pain relief and the possible healing of stress fractures that is simple, effective, and unlike many other remedies, is without complications.

Testimonies:

Bob Davies

I am a 47 yr old man who was diagnosed with MS IN 1994 [about 15 yrs ago]. My MS is the secondary progressive type so I don't experience regular exacerbations, just a steady decline. Although using a wheelchair for the last 10 years I still spend about 1 hr in the pool every day and try to keep as fit as possible.

About 2 yrs ago I started to experience severe pain shooting upwards from my upper RH row of teeth, so to the dentist I went, to be told, there is no dental reason for the pain. GP visit followed, where I was given painkillers & referred to a Neurologist. Meanwhile I had done as much research on TMJ pain on the net as I could and when the specialist suggested cutting the facial nerves I thought, there must be a better way.

Fortunately there was a physio at the same practice as my GP so I went to see him. He supported my suggestion of magnet therapy so I bought 2 of the 2nd largest magnets that Q magnets supply [I lived less than 5 km from Dianne's practice] and in fact, been there for physio on ankle previously]. I already had a splint to wear at night supplied by a dentist, and as soon as I began to wear the magnets taped over the TMJ joint I experienced immediate pain relief.

After 1 week of wearing the magnets 24/7 I was completely pain free. It was nearly 12 months before jaw pain returned.

Again I wore the magnets for 1 week or so again eliminating the pain. The TMJ pain seems to be related to MS episodes, but at least I know the jaw pain can be cured in 1 week or so with my Q magnets. Thankyou Q magnets.....Bob

Lucretia Diplan:

Lucretia Diplan is a retired doctor from Maryland in the US, this is her documented experience in using Q magnets to treat her daughters MS-induced trigeminal neuralgia.

I ordered the magnets for my 45-year-old daughter who has been suffering from Multiple Sclerosis for 15 years. As part of the nerves demyelination process characteristic of this terrible autoimmune non-curable disease, she developed last year trigeminal neuralgia with excruciating pain firing along the mandibula.

The first placement did not work.

I applied first the two tiny magnets (MiniQ's) along her jaw, one up next to the ear and the second on the spot where the pain is originating. She kept the magnets on her skin day and night for a full week with no relief whatsoever. For another 10 days she wore the two medium magnets on the same spots on her jaw as the first ones. No result, not even a slight alleviation. We are strong believers in the therapeutic action of magnetic fields. The neurologist who sees my daughter suggested we try therapeutic magnetic and he gave us your website where we ordered them. Unfortunately they did not work for my daughter although she was so hopeful that they will at least blunt the trigeminal neuralgia.

Physiotherapist and Clinical Educator for Q magnets, Dianne Hermans suggested the following placements.

I have had two patients with this exact condition that the ProQ's have worked wonderfully for them. You seem to have placed them in the right position, you will need to use the Pro's for the best effect, the MiniQ's will be too small for the job.

Place one over the temporomandibular joint which should be the main access to the trigeminal nerve.

One other placement I could suggest is to place one ProQ over the temporomandibular joint and the other at the base of the skull at the occiput over the basilar artery. You can use the MiniQ over the area where the pain originates, but the larger Pro's should be used over the larger nerve structures.

You could even try moving the one over the TMJ around a little to see if you get a better effect. If they are in the right place and are going to work, the effects should be felt almost immediately or at the most a day. Don't feel you have to leave them on for days at a time without changing the position.

Here was the response from Lucretia a few weeks later.

I have excellent news. After the original lack of response by using the two tiny magnets, we started on February 5 to use the big ProQ magnets we placed on the TMJ and base of the skull, respectively, per Miss Dianne's instructions. There have been two weeks since **THE TRIGEMINAL PAIN SUBSIDED ALTOGETHER**. The improvement was significant in the first 24 hours and subsequently receded gradually in a few days.

My daughter is currently pain-free after having suffered excruciating and constant pain for over a year.

She took off both magnets 3 days ago but, of course, keep them handy, just in case. Can you believe that not even strong opiates managed to alleviate the pain but for very short periods of time, and my daughter refused, for good reasons, to increase the dosage as she did not want to get dependent on them.

Now, for the first time in a year, my daughter was able to move her tongue in her mouth when speaking without triggering terrible pain along the jaw. Until then she was living on literally huge amounts of Orajel applied locally on the gums every 20 minutes, plus Oxidodon (she deliberately did not want to overuse to avoid dependency). She has not only been pain-free for a week now, but 2 days ago I removed the magnets from her skin to see if she can manage without them and SHE COULD. We keep the magnets in a special box and a safe place for future uses (hopefully not to be needed!!).

God bless you and grant you the best of everything.

FAQ

Do Q magnets work for everyone with TN?

No. While the results have been promising, there are some patients who have not responded to treatment.

How many patients have we used them on?

At this point (March 2010) we have had 11 people using Q magnets for TN over a 2 year period. Some came through our website, others were referred from the MS Society clinic and some from doctors referrals.

4 cases we would have to say have been extremely beneficial to the patient with complete or near complete cessation of pain. The best results were achieved with MS induced TN.

3 cases had varying degrees of success with reduced medication or complete cessation of pain for a time, but then might return after a number of weeks.

4 cases had some effect, but not enough to say it was a benefit.

Are magnets safe to use around the brain?

Q magnets are a static magnetic flux generator and does not create alternating or pulsing fields of energy. The years of research done on static magnetic fields have shown them to be safe. There are no known harmful effects caused by static magnetic fields up to 2 Tesla. The Magnetic Resonance Imaging Machine (MRI) is many times more powerful than rare earth static magnets and this has been deemed safe by the FDA. The WHO and the International Commission on Non-Ionizing Radiation Protection released a report in 2009 titled [GUIDELINES ON LIMITS OF EXPOSURE TO STATIC MAGNETIC FIELDS](#) which states that static magnetic fields under 2T or 20,000Gauss are safe for humans.

DISCLAIMER:

Neither the content in this paper, nor Q magnet technology is intended to be a substitute for any medical treatment that is recommended or prescribed by your doctor or health care professional. IF YOU HAVE chest pain, shortness of breath, or other symptoms of an ischemic attack or heart attack do not use this device until you have been seen by a physician. If you suspect an UNDERLYING MEDICAL PROBLEM, or your pain is severe and cannot be relieved with the use of these devices, please consult your health care provider. Neuromagnetics Australia Pty Ltd, its owners, employees or contractors do not diagnose, prescribe, or make any medical claims. Q magnet therapy is not intended to replace medical instructions or prescriptions without first consulting your doctor. No guarantee of effectiveness is made with the use of Q magnet therapy products, as individual results may vary.

For more information, please see www.qmagnets.com or contact Neuromagnetics Australia Pty Ltd on 07 3821 7300 or email info@qmagnets.com.