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# Chapter Nine

## Facial Pain

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“For two years now  
I feel as if there is a  
hot poker sticking  
into my right cheek.”

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## Cosmetic Surgery

Was it Abbott and Costello who used to say it? One of the comedian duo teams used to have a little skit: The first one says, “My face hurts!” The second one says, “It must. It’s killing me!”

Yet, as we will soon see, **facial pain is no laughing matter**. Especially when it occurs after cosmetic surgery.

Your expectation is to look refreshed, perhaps younger, the way you looked about ten years ago. Perhaps your eyes looked tired, and had bags. So you had your eyes “done” and a forehead “lift.”

Perhaps you developed jowls, your cheeks hung down a little, your cheek bones seemed flattened. You just looked old. So you had a facelift. And maybe cheek implants.

Perhaps your nose seemed too large, or like your fathers, or simply not quite right for your face. And your chin was too small. So you had a rhinoplasty and a chin implant.

Perhaps your skin had developed fine wrinkles around your lips, and the corners of your eyes. So you added a laser treatments to the above.

And why not? You deserve it! And you could afford it.

## Numbness and Burning: Cheek, Nose, Upper Lip

Brenda P. (not her real name), a 60 year old woman from Tennessee (not her real home state) speaks with a soft southern accent. She is fashionably, conservatively dressed in a suit.

Her face appears youthful. She appears to be about 45 years old. She is sitting here with a clearly older man.

Based upon the form she filled out in the waiting room, I can read that Mr. P., her husband, is a retired banker. But I have long since learned not to assume what the relationship is between any two people sitting together in my examining room. He looks like he could be her father.

Brenda appears sad, in pain, and even depressed. She is quiet.

“Good afternoon,” I say cheerfully, “I am Doctor Dellon. You must be Brenda. And, I continued, turning to the man, “What is your name?”

“I am Walter, Brenda’s husband,” the older man replied.

“What can I do to help you today?” I continued.

“Doctor Dellon,” I had a facelift about 12 years ago, by a good Plastic Surgeon in our town. He did an excellent job. I was very happy. Three years ago, I felt I was looking older and more tired again. So I had a second facelift. Walter and I went to another state, to see the most famous Plastic Surgery in our part of the country. He came very highly recommended. Of course he was a member of all the important Plastic Surgery Societies...” and then her voice trailed off and she stopped talking.

“Doctor Dellon” Walter took up the conversation for his wife, “That Plastic Surgeon simply **had no explanation for my wife’s pain. He told us her pain would go away. He told us he never had a patient whose lip and cheek and nose hurt after his procedure. He told us, in fact, that he was famous for this new procedure where he lifts up what he called the ‘midface’ by going along the surface of the bone. Can you help us?**” Walter asked.

“**Yes , I can help you,**” I answered. “Who gave you my name?”

Walter answered, “Doctor Paul Manson, the Chief of Plastic Surgery at Johns Hopkins Hospital” gave us your name. “We went to see him. He said you are pioneering techniques to treat painful nerve problems in the face. He said you and he have worked together for a long time, and we should come and see you.”

“He was kind to say that,” I said.” Dr. Manson and I were residents together at Johns Hopkins Hospital in 1978. There has not been a good solution to the type of pain that Brenda has. I have begun to apply the same principles and measurements that have been successful in treating pain in the hands and feet to the pain problems of the face. Facial pain can be present after facial injuries, like fracture, or after tumor surgery where part of the face has to be removed, and, sadly, can be a known complication after cosmetic surgery, which is your situation.”

Now it was Brenda’s turn. “Doctor Dellon, I am not angry with the other Plastic Surgeon. He was successful at making me look younger again. I like him. He was very concerned. He just did not know what to do. **For two years now I feel as if there is a hot poker sticking into my right cheek. My upper lip is**

numb and the right side of my nose burns. It feels as if my lip is swollen, but it is not. I have taken lots of different medications, and rub creams into my cheek. But this does not stop. It is present all day, every day. It hurts when I try to smile, and when I laugh. It....” Her voice trailed off again. Her frustration was clear. Tears came into her eyes. She was clearly depressed.

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Figure 9-1. Since her second facelift, Brenda has pain and numbness in the right cheek, lip and side of her nose. This has been present for three years. The painful area is outlined in blue. A faint scar is present over her cheek (arrow), where a peripheral nerve stimulator was placed into her face to try and relieve pain (see Chapter 10, Figure 10-4).

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## The Trigeminal Nerve and Facial Pain

*Tic douloureux* (French), or trigeminal neuralgia, is the classic name for facial pain of unknown cause. This pain comes on suddenly, is intense, and occurs in one of the *three* branches of the cranial (*trigeminal*) nerve that innervates the skin of the face (Figure 9-2). The cause of this type of facial pain is central, meaning the cause is inside your facial skeleton. It is now believed by many that a small artery in the back of the brain, pulsating against the trigeminal nerve, inside the skull, causes the pain. An operation, opening the back of the skull, a craniotomy, done by a Neurosurgeon, can relocate that artery, moving it away from the nerve, relieving the pain.

In the past, branches of the trigeminal nerve were divided, usually within the skull. This left one of the colored patterns of the face in Figure 9-2 numb. Often the pain was still not relieved.

Facial pain that occurs after an injury like a facial fracture, or after a tooth is pulled, or after a tumor is removed, or after cosmetic surgery must be due to an injury to a specific branch of the trigeminal nerve. These branch patterns are shown in Figure 9-3.



Figure 9-2. Each color represents one of the three branches of the trigeminal nerve, the nerve that sends facial sensation to the brain. Classic facial pain, tic douloureux, occurs in one of these regions. It is not a nerve injury.



Figure 9-3. Frontal view of Figure 9-2 with branches of the trigeminal nerve shown in black. Note that each colored territory has many specific nerve branches. The specific nerves each have a name and exit the facial skeleton through small openings in the bone to reach the skin of the face. It is because of this arrangement, that these nerves are liable to be injured if the facial bones are broken, or the skin is crushed or stretched.

In the upper extremity, the ulnar nerve at the elbow (funny bone) can become compressed either by direct pressure or injury to the bone. That nerve goes to specific fingers, the little and ring finger. When the ulnar nerve is trapped at the elbow, the little and ring finger are numb. Could this happen to a branch of the trigeminal nerve? And what complaints would result?

In the hand and the foot, we measure sensory changes with the Pressure-Specified Sensory Device™. This does not hurt. It measures the pressure threshold of the skin, and how close together you can tell if its two small metal tips are touching the skin. These pressures and distances between the prongs increase when the nerve is compressed and dying. These measurements can this be done for the trigeminal nerve and the facial skin. This allows us to determine if the trigeminal nerve branch that is causing the facial pain is compressed, or is dying, or is coming back to life.



Figure 9-4. Patient being tested with the PSSD to measure sensory function of the trigeminal nerve. It identifies nerve compression or nerve injury.

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## Brenda's Infra-Orbital Nerve

Brenda had neurosensory testing with the Pressure-Specified Sensory Device™. This test demonstrated that the infra-orbital nerve, the nerve that comes out of the cheek bone and receives information from the upper lip and side of the nose was compressed. Nerve fibers were dying, but the nerve was still alive. Brenda knew that this was a tender spot for her when touched.



“Brenda,” I discussed with her, “there is a chance that nerve can be separated from the scar tissue. Where the nerve comes out of the bone, it must be caught in scar with the other tissues that were used to pull up that “midface” part of your facelift. If this is successful, the sensation in your face can be saved and the pain relieved.”

Brenda bravely replied, “That would be wonderful, Doctor Dellon. Have you ever done this before?”

“No Brenda, I have not. I have been ready to do this. Doctor Rosson, my associate here at the Dellon Institute for Peripheral Nerve Surgery in Baltimore, and I have been planning this operation for some time now. We have been waiting for the proper person who needed our help. Doctor Rosson is on the Johns Hopkins Faculty in Plastic Surgery. He and I will design this operation just for you.”

Brenda came back to visit with us again. [And we decided together to proceed with an operation to free the infra-orbital nerve from the cheek bone and scar tissue.](#) We decided to use an approach through the mouth, under the upper lip in the gum. At the same time we decided to remove the peripheral nerve stimulator that had been put in previously to relieve her of her pain (see Chapter 10, Figure 10-4).

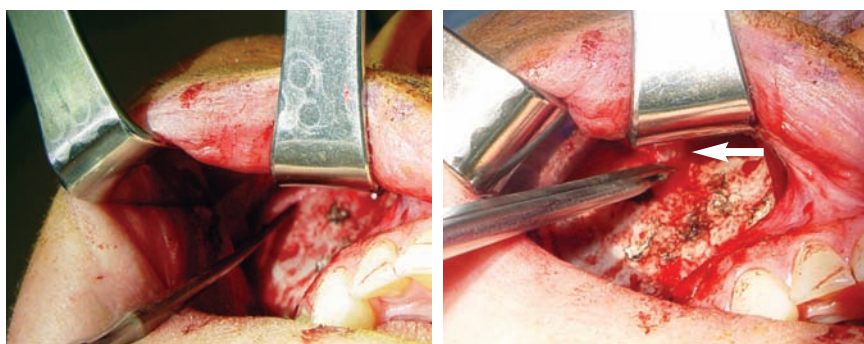


Figure 9-5. Brenda. Intra-operative photos of neurolysis of the infra-orbital branch of the trigeminal nerve. Left: The intra-oral approach, through the gum of the right upper lip. The instrument is lifting scar from the nerve. Right: The instrument points to the now shining white infra-orbital nerve (arrow) that has been freed from the scar (neurolysis).

Immediately after the surgery, Brenda had more numbness but less pain in her lip and cheek and side of her nose. She was also quite swollen.

At four weeks after surgery, Brenda was not sure if she was better or not. She had a lot of buzzing in her lip and side of her nose, but it no longer hurt when she pressed on the spot on her cheek that used to be tender.



Figure 9-6 Brenda at six weeks after surgery. Left: Healed intra-oral incision. Right: She was beginning to feel like smiling again.

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At eight weeks, Brenda sent me an e-mail. “[Doctor Dellon, I just had my first two very good days without pain.](#)” She then shared this philosophical insight: “[It is not the lack of pain that causes such outstanding relief, it’s the calmness that happens, the lack of anxiety, and also the lack of fear. All these feelings contribute to the agony of a person with chronic pain. I hope this information will help both you and Doctor Rosson in your endeavor to help people in pain. Anything I can do to help others, I intend to do.](#)”

Then one day, I opened my e-mail. It was about 5AM. My usual e-mail time. It was the third week of December. It was four months since the surgery to release Brenda’s infraorbital nerve from scar tissue. There was an e-mail from Brenda. It read:

“[Just wanted to let you know that last Wednesday was the best day I’ve had since this whole thing started.](#) I played 18 holes of golf at a beautiful course in Cali-

fornia. The golf score was bad, but I kept saying to myself ‘I feel so good, I haven’t felt this good in three years.’ The next day was almost as good, I went for a hike up a mountain and back down. I hope this information will help someone else.”

## Cheek Implants and Rhinoplasty



Figure 9-7. Left: After having cheek implants placed, and a rhinoplasty, this 28 year old woman lost the feeling in the upper lip on both sides, and she had pain that she could locate with one finger on the left side near her cheek bone. The cheek implants had been placed on to the cheek through an incision under the lip, like that shown in Figure 11-5. Center: appearance of cheeks and nose, demonstrating excellent cosmetic results. Right: The computer measurement with the Pressure-Specified Sensory Device™ for the upper lip. Note there is no blue (left side) bar present at all for two-point static touch, meaning the left infra-orbital nerve has most of its nerve fibers damaged. The red bar, for the right infra-orbital nerve is elevated, and has an asterisk (\*) next to indicating that the right infra-orbital nerve is also damaged. *The indicated treatment for this problem is to remove both cheek implants, as they are pressing on the infra-orbital nerve.*

## Lip Sync

When I was growing up, there was no fluoride in toothpaste. I visited the dentist often, had my tooth decay treated by drilling out the cavity and filling my teeth with silver and mercury. Now, when the fillings need to get replaced, or fall out, I get drilled again and my teeth capped. My teeth are an investment. My teeth are childhood memories of pain. **Dentist = Pain.**

“Brace yourself,” you are going to the Dentist. And then, of course, there were my braces. Years of having barbed wire around my upper and lower teeth. I learned not only that our school classrooms were crowded, but “crowding” happened to teeth also. I learned that “retainers” were not just fees paid to lawyers, but were something you wore in your mouth. But I did not have pain or numbness in my lips or jaw.

**Pain in your lip and jaw can happen if an Oral Surgeon or Dentist pulls out your third molar, and the root of the tooth hooks your nerve.**

With cosmetic or reconstructive dentistry, you can create new teeth by putting metal posts into the bone of your jaw, and then covering the metal posts with a plastic shaped to look like real teeth. **The metal posts can go deep enough to press on and injure the nerves to your lower lip, causing numbness and pain.**

If new bone is needed to build up your jawbone for the metal posts, and the bone is harvested (taken) from your chin bone your lower lip can droop. Your lip will sink. That is what happened to Angela.

Angela R. (not her real name), a 44 year old woman from Ohio had slowly developed bad infections around her teeth. She slowly lost bone in the upper and lower jaw, and had trouble chewing her food. She wanted new teeth. The Oral Surgeon told her she would first need to have bone taken from another part of her body, and “grafted” on to the existing bone. If this could be done, the bone would be thick enough to put in metal posts for new teeth. The Oral Surgeon chose to take the bone from her chin.

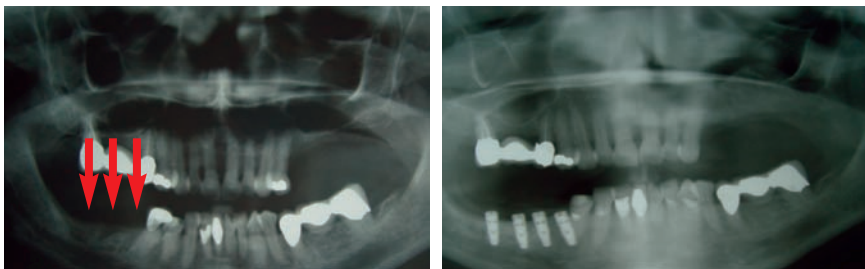


Figure 9-8. Angela's x-rays. Left: Before the bone graft to the right lower jaw. Note absence of teeth (red arrows). Right: After bone graft and metal post implantation.

“Doctor Dellon, can you help me?” asked Angela.

“Angela, tell me how your lip feels.”

“Doctor Dellon, **my lip feels swollen and stiff. My lip hurts, and my lip is numb, all at the same time,**” Angela answered. “**And I can’t stand to look at myself in the mirror anymore. My lips sinks down. It just hangs. I don’t have enough chin bone anymore to hold it up.**”

When I examined her, in deed, the chin did hang down, unsupported by the bone that used to be there, the bone that was now on her right lower jawbone (mandible). She had pain directly over where the inferior alveolar nerve existed the jaw to enter the lip (See Figure 9-9, arrow). At this point it gets a new name and is called the mental nerve, the nerve to the lip and chin.

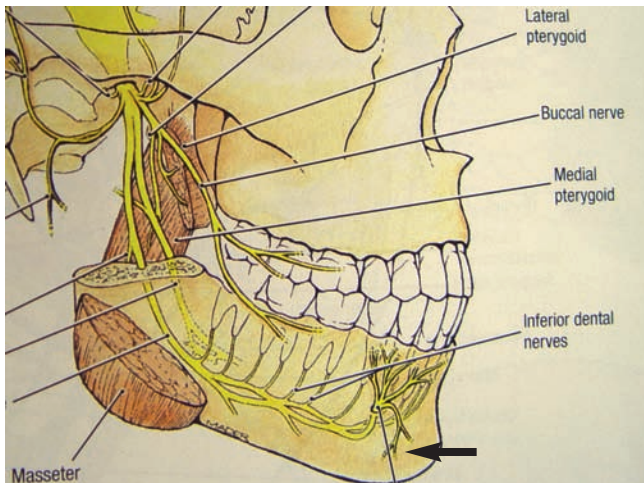


Figure 9-9. The nerves to the lower jaw and lip and chin all come from the mandibular branch of the trigeminal nerve, shown in yellow in this drawing. The closeness of the nerves to the teeth put them at risk for injury when a third molar, impacted wisdom tooth, is removed. This would cause jaw pain and create a numb lower lip. This nerve exits from the mandible at the mentum (chin), to enter the lip (arrow). This mental nerve can be injured when either a chin implant is placed to create a bigger chin, or when bone is harvested during oral surgery to create a thicker jawbone into which new teeth are placed.

“Angela, I can help you,” I said. “The nerve to the lip may be just stuck in scar tissue, in which case I can get it released. But the nerve may have been damaged by the tools that harvested the bone graft. In which case I will need to put a new nerve into your lip to get sensation back again.”

“That would be wonderful. Where do you get the new nerve, Doctor Dellon? They probably do not have them at Home Depot!” Angela smiled. She was relaxing, now that she new there was hope for her.

“Angela, there is a tube, made from absorbable sutures, that I helped to invent. It is called the ‘Neurotube™’. I would put the end of the nerve from the bone into one end of the tube, and the end of the nerve from your lip into the other end of the tube, and your own nerve would grow across the tube, reconnect, and in about three months, you would have feeling back in your lip. Then the tube is absorbed by your body.”

“Have you done this before for the lip Doctor Dellon?” Angela correctly asked. She already had complications from surgery!

“Yes Angela. The first time I did this was in 1991. That patient had their wisdom tooth removed, and had jaw pain, and a numb lip. The report was published in the Plastic Surgery literature in 1992.\* Of course a piece of your own nerve could be taken from your arm or leg to accomplish, but that would leave a scar and an area of numbness.

Angela concluded the consultation with a final question: “What about my drooping chin and lip Doctor Dellon. I look like a witch.”

“Angela,” I replied, “ I can fix that for you too. You need to replace the missing chin bone with a chin implant, and the muscle to your lip has to be repositioned at a higher level. This can be done when the nerve is fixed.”

“Thank you Doctor Dellon.”

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\*Crawley WA, Dellon AL: Inferior alveolar nerve reconstruction with a polyglycolic acid, bioabsorbable nerve conduit: A case report. *Plast Reconstr Surg*, 90:300-302, 1992.

## Pain Solutions Summary

After facial or oral injury or surgery, facial pain is due to an injury of the trigeminal nerve in the face. This is not tic douloureux, which is a problem within the skull. A nerve block identifies which nerve branch is the source of pain.

It is now possible to measure your facial sensation with the Pressure-Specified Sensory Device™. This is not painful. This measurement gives information as to whether the nerve can be saved or needs to be reconstructed.

There is hope for you.

Go to [Dellon.com](http://Dellon.com) or call +1 877-DELLON-1 (+1 877-335-5661).

