The part of the central nervous system that processes sensory information comprises the sensory system, which consists of sensory receptors, neural pathways, and parts of the brain involved in sensory perception. Traditionally, there are five senses: sight, smell, taste, touch, and hearing. All sensation must be processed in the brain by a normally functioning central nervous system for proper perception.

In addition, each sensation is perceived through a specific sense organ. Each of these consists of specialized cells that have receptors for specific stimuli such as sound or taste. From these special sensory receptors, 12 pairs of cranial nerves transmit information about the senses of balance, smell, sight, taste, touch, and hearing. This information is processed in the central nervous system and thus
sent to the brain. There, instructions are formulated that travel through the cranial nerves to the skeletal muscles. In the face and throat, for example, these muscles control movements for smiling and swallowing.

A brief review of the sense organs will be given here. The eye is the organ of vision. Sight is the most developed sense in humans, followed closely by hearing. The ear is the organ of hearing. The receptors for taste, called taste buds, are situated chiefly on the tongue, but they are also found in the roof of the mouth and near the pharynx. They are able to detect four basic tastes: sweet, salty, bitter, and sour. The nose is the organ responsible for the sense of smell. The sense of touch is spread throughout the body. Nerve endings in the skin and other parts of the body transmit touch sensations to the brain. Four kinds of touch sensations can be identified: cold, heat, contact, and pain. In addition to sight, smell, taste, touch, and hearing, humans also sense balance, pressure, temperature, pain, and motion that may involve the coordinated use of multiple sensory organs. For example, the sense of balance is maintained by a complex interaction of visual inputs, the proprioceptive sensors, the inner ear vestibular system, and the central nervous system.

The disorders of the sense organs discussed in this chapter are a group of neurological disorders that involve the central nervous system. They involve neurological diseases or injury that cause impairments to vision, hearing, taste, smell, or touch. Sense organs are vulnerable to various disorders and can be damaged by trauma, infections, degeneration, structural defects, tumors, blood flow disruption, and autoimmune disorders. Diseases of the brain, such as multiple sclerosis, stroke, tumors, and Parkinson’s disease can often result in dysfunctions of vision, hearing, taste, smell, and touch.

Any sudden or gradual changes in the five senses should be brought to a physician’s attention promptly, since early diagnosis and treatment are usually effective and can prevent serious deterioration. Scalp acupuncture has been proven to have very effective results in treating many types of sensory disorders due to brain damage. It usually brings about improvement immediately, sometimes taking only one to two treatments. The disorders discussed in this chapter are commonly seen in our practice of scalp acupuncture.
Ménière’s Syndrome

Ménière’s syndrome is characterized by the buildup of fluid volume in the semicircular canals causing elevated pressure in the ear. The pattern and incidence of the symptoms may vary from patient to patient, but the general symptoms are the same: dizziness, vertigo, headache, tinnitus, and the sensation of pressure in the ear. There may also be severe nausea and vomiting and profuse sweating during an acute episode. In some cases, there is progressive deafness in the affected ear, often leading to a permanent hearing disability or entire hearing loss. The cause of Ménière’s syndrome, as defined by Western medicine, is unknown, so there is no specific treatment in conventional medicine.

CASE HISTORY #25

Larry was 41 when he came to our clinic in Albuquerque, NM. He had been suffering from constant dizziness and vertigo for more than two weeks. He was diagnosed with Ménière’s syndrome. The vertigo was so severe that he felt the whole room was violently spinning and he fell down easily if standing by himself. He had to spend whole days flat on his back with his eyes closed in order to avoid head movement that aggravated the vertigo. Larry experienced nausea, vomiting, temporal headaches, and a sensation of fullness in his ears. All symptoms were exacerbated due to severe stress at work. Other symptoms included constipation, dry mouth, excessive thirst, blurring of vision, and tinnitus at a high pitch. He had become quite irritable, angry, and frustrated. His complexion was red and urine was yellow. His tongue was red with a thick, yellow coating, and he had large, tight, and slippery pulses.

**Chinese medical pattern discrimination:** Hyperactivity of liver yang with liver wind stirring internally, damp heat in the middle burner

**Scalp acupuncture treatment**

**Area selection**

**Primary area:** Vertigo and Hearing Area  
**Secondary area:** Liver Area
Manipulation

Needles should be inserted in the Vertigo and Hearing Area and stimulated bilaterally. The Vertigo and Hearing Area is relatively sensitive to scalp acupuncture because of the temporalis muscle under the skin, which has more blood vessels than other nearby tissue. Always put one needle in ear point Shen Men to help patients relax and reduce the sensitivity of needle insertion and stimulation of the scalp. Pay attention to the angle of needle insertion and make sure it is 15–25 degrees from the skin of the scalp. If needles are inserted in the wrong layer of the scalp, especially into the muscle, it is painful enough that some patients cannot tolerate it and must stop treatment. Rotate the needles at least 200 times per minute with the thumb and index finger for 1–3 minutes, twirling them as vigorously as the patient can tolerate and repeating stimulation every 10 minutes. During treatment, some patients may feel their vision change or have sensations of pressure, fullness, or tic in their eye or ear. Patients with some or all of these sensations usually respond and improve more quickly. Retain the needles for 25–30 minutes. Treatment is given two to three times per week, and a therapeutic course consists of 10 treatments.

Results of Case #25

During the first scalp acupuncture treatment, Larry reported that a “curtain” in front of his eyes felt like it was lifting. This sensation cleared his mind, and the blurred vision and headache disappeared. Quickly following these results, the vertigo and dizziness diminished significantly. After this first treatment, he was able to walk to the secretary’s desk to pay his bill and
make another appointment without assistance. Larry had not had any episodes of dizziness and vertigo since the first treatment and had resumed driving to work. The anger and frustration diminished dramatically, and he did not experience tinnitus or constipation anymore. After the fifth and last treatment, his urine cleared, his tongue changed to slightly red with a thin, white coating, and the pulses softened. In the following 12 years, the patient had only one episode of vertigo and dizziness, due to high stress at work. After two scalp acupuncture sessions, Larry recovered again.

Discussion

Scalp acupuncture has a remarkable effect on Ménière’s syndrome as well as dizziness and vertigo from other causes such as hypertension, hypotension, anemia, and hypoglycemia. About 85% of the patients we have treated with scalp acupuncture due to these conditions show immediate positive results during the initial visit. Most only need four to eight treatments to be free of symptoms, which is fewer sessions than with regular body acupuncture and ear acupuncture. In our practice, however, we have found that it is very helpful to use other acupuncture methods along with scalp acupuncture. The selection of body acupuncture points should be individualized based on the differentiation of patterns in Chinese medicine. For instance, Xing Jian (Liv 2) and Zu Lin Qi (GB 41) are for hyperactivity for liver yang, Feng Long (St 40) and Yin Ling Quan (Sp 9) for retention of dampness and phlegm, Zu San Li (St 36) and San Yin Jiao (Sp 6) for deficiency of qi and blood, and Tai Xi (Ki 3) and Zhao Hai (Ki 6) for depletion of kidneys. Body acupuncture can enhance the results of scalp acupuncture and address underlying constitutional disorders. When combined, scalp and body acupuncture treat root problems of dizziness and vertigo and prevent them from reoccurring.

Tinnitus

Tinnitus is a perception of sound in the absence of an acoustic stimulus. The sound may be high-pitched like whistling, roaring, or hissing, or low pitched such as buzzing, ringing, and humming. Tinnitus may be intermittent, contin-
uous, or pulsatile, and it can be in one or both ears. The mechanisms causing tinnitus are obscure. The common causes are ear infections and inflammation, Menière’s syndrome, acoustic neuroma, benign tumors, anemia, hypertension, hypothyroidism, head trauma, and side effects of some drugs. So far there is no specific medical or surgical therapy for tinnitus in Western medicine.

**CASE HISTORY #26**

Mary came to our clinic at age 48 having suffered from tinnitus for two and a half years. She reported that the onset came from battling emotional stress for a long time. She said the constant ringing in her ears was very high-pitched like a hissing teakettle. Sometimes it sounded like fingernails scratching on metal. She tried to relax through meditation, yoga, and other exercises, as well as changing her diet, but the intrusive noises in her ears remained. There was an increase in intense anxiety, irritability, and depression, and Mary suffered from fatigue due to lack of sleep. Other symptoms included no appetite, diarrhea, and an inability to relax. An otolaryngologist and an audiologist offered medications to treat anxiety, depression, and insomnia, but no relief for tinnitus. The initial examination revealed that the tongue was red with a thick, white coating. There was tremor on the tongue and teethmarks on the front and sides of the tongue. Her pulses were wiry and fine, and the cubit (chi) positions were noticeably weaker bilaterally than the other positions.

**Chinese medical pattern discrimination:** Liver qi binding stagnation with occasional flaring of liver heat, spleen qi deficiency

**Scalp acupuncture treatment**

*Area selection*

**Primary area:** Vertigo and Hearing Area

**Secondary area:** Head Area and Thoracic Cavity Area

*Manipulation*

For tinnitus and dizziness, needles should be inserted in the Thoracic Cavity Area and stimulated bilaterally, while the Head Area should be stimulated
unilaterally. Vertigo and Hearing Area is relatively sensitive to scalp acupuncture treatments because of the temporalis muscle with its many blood vessels just under the skin. Always insert one needle in ear point Shen Men to help patients relax and reduce the sensitivity of needle insertion and stimulation of the scalp. Pay attention to the angle of needle insertion and make sure it is at an oblique or acute angle of about 15–25 degrees. If needles are inserted in the wrong layer of the scalp, especially in the muscle, it is painful enough that sometimes treatment must stop. Rotate the needles at least 200 times per minute with the thumb and index finger for 1–3 minutes, twirling them as vigorously as the patient can tolerate and repeating the stimulation every 10 minutes. During treatment, some patients may feel sensations of pressure or fullness in their ears. Patients who experience these responses usually improve more quickly. Retain the needles for 25–30 minutes. Give treatment two to three times per week; a therapeutic course consists of 10 treatments.

Results of Case #26

During the initial session, Mary felt relaxed and then fell asleep. When she awoke she reported that the pressure and sensation of fullness in her ears were greatly relieved, and the ringing sensation seemed a little diminished as well. At the beginning of the second treatment, she reported that she had slept much better for several nights, and the ringing in her ears had changed from a high pitch to a low pitch like a buzzing or humming sound, which she could tolerate much better. The mood swings including depression, anxiety, and irritability were better, the loss of appetite was significantly improved, and she had not had diarrhea since the last treatment. The tinnitus and other symptoms continued to improve in the following sessions. At the sixth treatment, the ringing in her ears had become intermittent, and noises in her ears seemed to be moving away from her head and fading into the background. Other symptoms had almost completely disappeared. Her tongue had turned a light red with a thin, white coating, and the tremor was gone. The teeth-marks on the tongue were better, and the pulses had become softer and only slightly wiry. By the tenth visit, the tinnitus was completely gone, allowing Mary to enjoy her life again.
Discussion

Scalp acupuncture has a fairly good track record for controlling tinnitus. However, treatment should be directed at the underlying cause if that is known. In addition to scalp acupuncture, the selection of body acupuncture points should be individualized, based on the differentiation of patterns in Chinese medicine. For instance, Xing Jian (Liv 2), Tai Chong (Liv 3), and Zhong Zhu (TB 3) would be selected for retention of damp heat in the liver and gallbladder, and Tai Xi (K i 3), Zhao Hai (K i 6), and Fu Liu (K i 7) would be used for kidney weakness and deficiency.

The types of sound heard by those with tinnitus do not necessarily indicate what the underlying causes are, in terms of Western medicine. They do, however, provide clues for the treatment strategy in Chinese medicine. Generally speaking, sounds with high pitch indicate an excessive condition that requires reducing or draining techniques, while lowpitched sounds indicate a deficient condition that requires reinforcing or supplementing techniques. In addition, tinnitus often gets worse with any type of stress. Therefore the scalp areas that have the function of relieving anxiety, irritability, or depression should be combined with the Vertigo and Hearing area for best results. Other therapies that promote relaxation and a sense of well-being such as meditation, hypnosis, yoga, and herbs may be helpful in relieving tinnitus or the distress it causes.

Hearing Loss

Loss of hearing refers to conditions in which individuals are fully or partially unable to detect or perceive sound. Ordinarily, sound travels as waves, which are collected by the external ear and cause the tympanic membrane to vibrate. Sound energy passes through the air of the external ear, the bones of the middle ear, and the liquid of the inner ear. Then it is translated into nerve impulses and sent to the brain. There may be a dysfunction in hearing if any of the above-mentioned processes are interrupted. It is known as conductive hearing loss when interruption occurs in the external or middle ear, and it is called sensory hearing loss when there is damage to the cortex and acoustic nerve. Neural hearing loss is mostly caused by damage to the acoustic nerve and the parts of the brain that control hearing. Removing the blockages, such as ear-
wax, infection, or tumor, usually solves conductive hearing loss. However, there is no effective treatment in Western medicine for hearing loss due to sensory or neural causes.

In Chinese medicine, hearing loss is usually believed to be due to a decline in kidney function.

**CASE HISTORY #27**

Judy was 44 when she came to our clinic in Santa Fe, NM, in 2000 with a complaint of hearing loss in the left ear that occurred after an ear infection a few months before. Her physician had said that the hearing loss was permanent. Since the infection, she also had experienced constant congestion and pressure in the left ear. Examination revealed a red tongue with teeth-marks and a thin, white coating. The pulses were wiry and slippery with less strength in the cubit (chi) positions bilaterally.

**Chinese medical pattern discrimination**: Kidney yin and yang deficiency

**Scalp acupuncture treatment**

**Area selection**

**Primary area**: Vertigo and Hearing Area

**Secondary area**: Reproductive Area

**Manipulation**

Needles should be inserted in the Vertigo and Hearing Area and stimulated bilaterally. Rotate the needles at least 200 times per minute with the thumb and index finger for 1–3 minutes. Vertigo and Hearing Area is relatively sensitive to scalp acupuncture treatment because of the temporalis muscle with its many blood vessels just under the skin. Always place a needle in the ear point Shen Men to help the patient relax and reduce the sensitivity of needle insertion and stimulation of the scalp. Pay attention to the angle of needle insertion and make sure it is at an oblique angle of about 15–25 degrees. Twirl the needles as vigorously as the patient can tolerate and repeat stimu-
lation every 10 minutes. During treatment, some patients may feel sensations of pressure, fullness, or tics in their ears, and those patients may improve more quickly. Retain the needles for 25–30 minutes. Treatment should be given two to three times per week, and a therapeutic course consists of 10 treatments.

Results of Case #27

During the first scalp acupuncture treatment, Judy experienced very positive results. After two needles were inserted she felt the pressure and congestion in her ear gradually subside and her hearing improved. At the second treatment, Judy reported her hearing had increased by about three-quarters and the pressure and congestion were gone from the left ear. The second treatment caused total improvement in her hearing, and treatment was complete.

Discussion

Scalp acupuncture may help patients with sensory and neural hearing loss to improve the circulation of fluids in the head that lead to chronic congestion and noises or restore the ear function involved in transmitting signals from the inner ear to the brain. In our practice we have found that it is helpful also to use body acupuncture in these cases. The points should be individualized based on the differentiation of patterns in Chinese medicine. For instance, Xing Jian (Liv 2), Zhu Lin Qi (G B 41), Zhong Zhu (TW 3) are for retention of damp-heat in the liver and gallbladder, and Tai Xi (Ki 3), Shen Shu (Bl 23), and Zhao Hai (Ki 6) for depletion of the kidneys.

Vision Loss

Blindness is the condition of losing visual perception due to physiological or neurological factors. Total blindness is the complete lack of visual light perception and is clinically recorded as NLP, an abbreviation for no light perception. Blindness sometimes refers to severe visual impairment with only light perception. In those cases, the person has no more sight than the ability to tell light from dark and the general direction of a light source. Serious visual impair-
ment has a variety of causes. The most common causes of blindness are diabetes, glaucoma, macular degeneration, accidents, cataracts, onchocerciasis, trachoma, and leprosy. People with injuries to the occipital lobe of the brain may still be partially or totally blind despite having undamaged eyes and optic nerves.

**CASE HISTORY #28**

Terry, a 46-year-old male in a wheelchair, was brought to our clinic in Albuquerque, NM. He had paralysis and pain in the left arm and leg and was blind since having a stroke three months before. He had received physical therapy for two months with no improvement. Upon examination, it was found that the left hand and foot had no movement at all, and the left arm showed a little movement. Terry could see some very bright light occasionally. His tongue was red with a thin, white coating, and his pulses were bilaterally wiry and slippery.

**Chinese medical pattern discrimination:** Qi stagnation with phlegm obstructing the channels

**Scalp acupuncture treatment**

*Area selection*

**Primary area:** Vision Area  
**Secondary area:** Liver Area

*Manipulation*

The Vision Area is the primary center to treat blindness and other eye disorders. The Liver Area is another important treatment site. Needles should be inserted in both areas and stimulated bilaterally. Proper manipulation techniques are crucial in obtaining the desired results. Rotate the needles at least 200 times per minute with the thumb and index finger for 1–3 minutes, twirling them as vigorously as the patient can tolerate and repeating the stimulation every 10 minutes. As mentioned previously, during treatment some patients have sensations of heat, cold, tingling, numbness, heaviness,
distention, or the feeling of water or electricity moving along their spine, legs, or feet. Patients with some or all of these sensations usually respond and improve more quickly. Retain the needles for 30–45 minutes. Patients are treated two to three times a week depending upon the degree of blindness or paralysis. A therapeutic course consists of 10 treatments.

**Results of Case #28**

During the first consultation, we told Terry that he had a good chance to regain movement in his left arm and leg, but restoring vision was not certain. According to Western medical literature, blindness is not usually reversible. With the first scalp acupuncture treatment, Terry had a positive response. He was able to lift his left arm and move his left leg 10 minutes after the needles were inserted. His vision, however, showed no change. During the second treatment, Terry showed more improvement with the formerly paralyzed left arm and leg. He reported seeing flashing lights as the needle in his scalp on the occipital area was stimulated. We held up different numbers of fingers to test if Terry’s vision had actually changed, but he got the correct response only half the time. The results were the same during the following two treatments.

A change occurred during the fifth treatment, when Terry noticed that the doctor had a mustache. When asked why he could correctly identify the number of fingers held up only half the time, Terry replied that his flash visions turned on and off by chance outside of his control.

Another unusual occurrence came during the eighth treatment. Terry said the scalp acupuncture worked like an electrical switch; his sight turned on when we inserted the needles and turned off when we removed them. He wanted more treatments and of a longer duration. After the eighteenth session, though his vision was still only present when there were needles in his scalp, Terry walked out of our clinic without assistance. He could lift his left arm above his head and use his left hand for many functions.

We also used other acupuncture techniques, such as putting needles in the local point Jing Míng (Bl 1) and at some distal points such as Tai Chong (Liv
3) and Guang Ming (GB 37), which have proven effective for eye disorders, but Terry’s vision stayed unchanged. He could see everything when the needles were in his scalp and was blind as soon as the needles were removed.

At the nineteenth treatment, we suggested trying qi gong therapy for blindness. After inserting two needles in the Vision Area of the occipital region, we held the needle handles and performed qi gong therapy for 10 minutes. Although there was no immediate improvement, the family was told to pay attention to Terry’s vision because it might improve within a few hours or a day after qi gong therapy. The next morning, we received a phone report that Terry’s vision had returned early that day. Since then his vision has been permanently restored.

Discussion

Scalp acupuncture has been used to treat several eye disorders in our practice, but Terry is the only patient with blindness whom we have treated. Although good results were achieved in this case, the treatment of blindness is very challenging. Other acupuncture techniques for blindness have been proven effective as well, especially body acupuncture. Commonly used body points are: Jing Ming (Bl 1), Qiu Hou (extra point), Guang Ming (GB 37), and Tai Chong (Liv 3). Based on our clinical experience, electrical stimulation to the above points with high frequency and low intensity is also very helpful.

Qi gong is an ancient breathing technique combined with gentle movement and meditation to cleanse, strengthen, and circulate the life energy (qi) of the body. It is a powerful system originating in China to promote health and vitality and a tranquil state of mind. Many people practice qi gong for themselves the same way one might do a daily yoga practice, both for its preventative and self-healing value and as a type of deep breathing exercise. When a trained person uses qi gong to do health assessment and noncontact treatment, it is called external qi healing. While it can increase the efficacy of other treatments, extensive practice and meditation is required in order to achieve this type of healing power. External qi healing techniques may be used alone for wellness
and treatment or may be combined with massage and acupuncture. It is necessary to mention that there are many people practicing external qi healing in the world, but few actually have mastered this powerful technique. This is the only case where the author (Jason Hao) has applied external qi healing because he is still training in this method.

**Diplopia (Double Vision)**

Diplopia (double vision) is the perception of two images from a single object. The double images may be horizontal, vertical, or diagonal in relationship to each other. When double vision occurs because the two eyes are not correctly aligned while they are aiming at an object, this is called binocular diplopia. It is called monocular diplopia when double vision occurs while viewing with only one eye. Alcohol intoxication or head injury such as concussion can cause temporary diplopia. The most common causes of double vision are misalignment of the two eyes due to functional problems in the visual system. Any problem that affects one or more of the muscles around the eyeball that control the direction of the gaze can cause binocular diplopia, especially damage to nerves controlling the extraocular muscles. Nerves can be injured by brain damage caused by multiple sclerosis, stroke, head trauma, a brain tumor, or infection. Western medical treatment for binocular diplopia includes surgical straightening of the eye, prism lenses, and vision therapy.

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**CASE HISTORY #29**

Samuel, a 59-year-old male, came to our seminar in Pittsburgh, PA, in 2007. Since a car accident in 1970, he had suffered from double vision. Though he had seen many doctors, there was still no solution for it. He wore glasses to correct the double vision, but still, when looking a certain way, he experienced the problem. Samuel also suffered from headaches on the right side rated 6 on a scale of 1–10; the left side of his low back was in pain and rated an 8 out of 10. He also suffered from neck stiffness and often experienced tingling and numbness in his feet. His tongue had a red tip and was otherwise slightly purple with a thin, white coating. His pulses were slippery and wiry and, the cubit (chi) position pulses were bilaterally weaker than the other positions.
Chinese medical pattern discrimination: Liver blood-kidney yin and essence deficiency

**Scalp acupuncture treatment**

*Area selection*

**Primary area:** Vision Area, Foot Motor and Sensory Area, and lower 2/5 Motor Area  
**Secondary area:** Liver Area

*Manipulation*

Vision Area, Foot Motor and Sensory Area, and Liver Area should be treated with needles bilaterally. Also, upper 1/5 Sensory Area should be needled on the left side of the scalp only. Because the Vision Area is one of the most sensitive, always insert a needle in ear point Shen Men to help the patient relax and to reduce the sensitivity of the needle insertions and stimulation of the scalp. Use the fewest number of needles possible in the scalp and rotate them at least 200 times per minute with the thumb and index finger for two minutes, twirling as gently as possible at the beginning so that the patient can tolerate the sensations better, and repeating the stimulation every 10 minutes. During treatment, patients may experience sensations of heat, cold, tingling, numbness, heaviness, distention, tears, or the sensation of water or electricity moving around the eyes or face. Keep the needles in place for 10–20 minutes. The treatment is given two times per week at the beginning and then gradually reduced to fewer sessions as the patient experiences improvement. A therapeutic course consists of 10 treatments.

*Results of Case #29*

Samuel had a very positive response to his first scalp acupuncture treatment. He felt more tingling sensations in his feet just a few minutes after the needles were inserted in his scalp. The pain in the left side of his lower back started to diminish five minutes later. After 15 minutes had passed, his headache disappeared and the numbness and tingling sensations in his feet showed some improvement as well. At the beginning of treatment he removed his glasses and experienced double vision immediately. At the end
of the treatment, he reported that the double vision as well as the tingling and numbness in his feet were all completely gone. He was very happy that he did not need to wear glasses to correct his vision any more.

Discussion

Scalp acupuncture has a fairly good track record for controlling double vision. However, the treatment of double vision should be directed at the appropriate underlying condition if the cause is clear, such as in neurological disease. The selection of body acupuncture points should be individualized based on the differentiation of patterns in Chinese medicine. For instance, Qu Quan (Liv 8), Tai Chong (Liv 3), and Gong Sun (Sp 4) are chosen for deficiency of liver blood, and Gan Shu (Bl 18), Shen Shu (Bl 23), and Zhao Hai (Ki 6) for deficiency of kidney and liver yin.