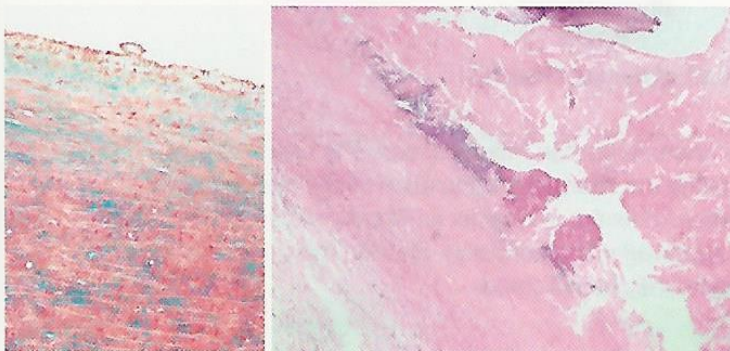


# Diseases/Conditions and Indications/Contraindications for Massage Therapy

Disease/Condition	Indications/Contraindications for Massage Therapy	Chapter Reference
<p><b>Aneurysm</b></p> <p>An aneurysm is a weakening and bulging of the wall of a blood vessel, usually an artery. Aneurysms occur most often in the abdominal aorta and the brain.</p>	<p>Treatment is contraindicated. Refer client immediately to a physician.</p>	4
	<p><b>FIGURE B-1</b> Micrographs of aneurysms. (From Tsang VT et al: Interruption of the aorta with multilobulated arch aneurysms, <i>J Thorac Cardio Surg</i> 133(4): 1092-1093, 2007.)</p>	
<p><b>Asthma</b></p> <p>Acute asthma is spasmodic constriction of the smooth muscle in the bronchial tubes. This is sometimes called an <i>asthmatic attack</i>. Chronic asthmas involve inflammation in the bronchial tubes along with excessive mucus production.</p>	<p>Massage is indicated for clients with asthmas as long as they are not having an asthmatic attack. Between episodes, massage can be beneficial for general stress management and relief of tension in muscles.</p>	12

Continued



**Disease/Condition****Atherosclerosis**

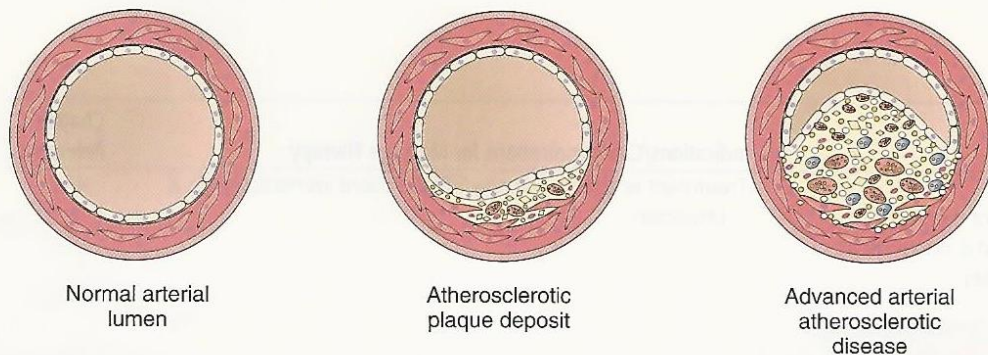
This is a condition in which arteries become inelastic because of the development of plaques. Because of the inelasticity, atherosclerosis is also called *hardening of the arteries*. Plaque buildup in the walls of the arteries that supply the heart is referred to as *coronary artery disease (CAD)*. If enough plaque builds up, blood flow can become obstructed, leading to a heart attack or stroke. Because the plaque has a rough surface, thrombosis (formation of a clot in an unbroken blood vessel) can occur. The clot can obstruct blood flow in the area in which it develops, or it can break off and become an embolus.

**Indications/Contraindications for Massage Therapy**

Mild atherosclerosis is an indication for massage. Advanced atherosclerosis may be a contraindication for massage, but the gentle resting of hands on the body used in some forms of touch systems might be indicated with supervision.

**Chapter  
Reference**

11



**FIGURE B-2** Atherosclerosis. (From Frazier MS, Drzymkowski JW: *Essentials of human diseases and conditions*, ed 4, St. Louis, 2008, Saunders.)

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**Bell's palsy**

This palsy causes partial or total paralysis of the facial muscles on one side as the result of inflammation or injury to the seventh cranial nerve.



**FIGURE B-3** Bell's palsy. (From Neville BW et al: *Oraland maxillofacial pathology*, ed 3, St. Louis, 2009, Saunders. Courtesy Dr. Bruce Brehm.)

Massage approaches can reduce stress. The practitioner must gauge the intensity and duration of any massage application so as not to overtax an already stressed client, aggravating the condition. Shorter, more frequent treatments may be indicated.

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**Breathing pattern disorder**

This disorder is complex and involves altered breathing patterns. It is associated with stress and anxiety.

Therapeutic massage approaches and moderate application of movement therapies such as tai chi, yoga, and aerobic exercise assist with normalizing breathing patterns and altering mood, feelings, and behavior.

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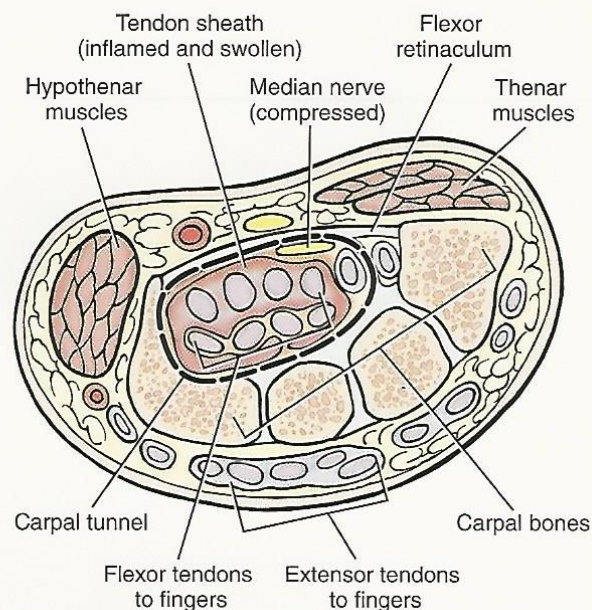


Disease/Condition	Indications/Contraindications for Massage Therapy	Chapter Reference
<p><b>Bursitis</b></p> <p>This is inflammation of the bursae, especially those located between the bony prominences and a muscle or tendon such as in the shoulder, elbow, hip, and knee. It usually results from trauma and repetitive use.</p>	<p>Therapeutic massage can help manage pain and support an increase in range of motion. However, massage directly over the bursae is contraindicated.</p>	<p>8</p>
<p><b>Cancer</b></p> <p><i>Dysplasia</i> is the term for a change in normal body cells. Some of these abnormal cells can develop into cancerous cells. Some types of abnormal cells grow slowly and can be treated easily; other types are aggressive and invasive malignancies that can spread to other parts of the body. Common types of cancer include lung cancer, breast cancer, colorectal cancer, leukemia, bone cancer, melanoma (malignant skin cancer), prostate cancer, and stomach cancer.</p>	<p>If the cancer is detected and successfully treated before metastasis, the client can receive any type of massage therapy. However, massage for clients with malignancies is contraindicated unless the client's health care professional gives approval and supervision. If approval and supervision for massage is given, the practitioner must adjust treatments for any radiation therapy, chemotherapy, or surgical procedures the client is undergoing. As with most chronic illness and pain, therapeutic massage offers the client palliative or comfort care and may be helpful in reducing stress stemming from the cancer and cancer treatments the client is receiving. Sometimes clients with colorectal cancer have colostomies. If so, the practitioner needs to adjust treatments to accommodate the colostomy bag.</p>	<p>Multiple</p>



### **Carpal tunnel syndrome**

This syndrome results from irritation of the median nerve as it passes under the transverse carpal ligament into the wrist. Symptoms include pain, numbness, tingling, and weakness in the part of the hand innervated by the median nerve, namely the thumb, the first and second finger, half the third finger, and the palm of the hand proximal to these digits.



Various forms of massage application can reduce muscle spasms, lengthen shortened muscles, and soften and stretch connective tissue, restoring a more normal space around the nerve and possibly alleviating impingement. When massage is combined with other appropriate methods, surgery may not be necessary. If surgery is performed, the practitioner must manage adhesions appropriately and keep soft tissues surrounding the healing surgical area supple to prevent reentrapment of the nerve. Before doing any work near the site of a recent incision, the practitioner must obtain approval from the client's physician. In general, work close to the surgical area can begin after the stitches have been removed and all inflammation is gone. As healing progresses, soft-tissue methods can be used to address the forming scar more directly. Direct work on a new scar usually is safe 8 to 12 weeks into the healing period.

**FIGURE B-4** Cross-section of wrist affected by carpal tunnel syndrome.

Disease/Condition	Indications/Contraindications for Massage Therapy	Chapter Reference
<b>Contusion</b> A muscle bruise results from trauma to the muscles and involves local internal bleeding and inflammation.	Direct work over the area of injury is contraindicated regionally until all signs of inflammation have dissipated.	9



**FIGURE B-5** Contusion. (From Fritz S: *Mosby's fundamentals of therapeutic massage*, ed 5, St. Louis, 2013, Mosby.)

#### **Coronary artery disease**

See Atherosclerosis.

#### **Decubitus ulcer**

Also called *bed sores* or *pressure ulcers*, decubitus ulcers are caused by impaired blood circulation to the skin. The impairment is due to pressure of the body against a surface such as a bed, cast, or wheelchair. The impaired blood flow leads to necrosis (tissue death) and a subsequent high risk of infection.

Massage can be beneficial in preventing the development of decubitus ulcers. Once the tissue has been damaged, however, the risk of infection is high, so massage is regionally contraindicated. However, massaging around the edges of the affected area may stimulate blood flow to assist in healing.

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**FIGURE B-6** Pressure ulcer, showing tissue necrosis. (From Potter PA, Perry AG: *Fundamentals of nursing*, ed 7, St. Louis, 2009, Mosby.)



# Disease/Condition

## Diabetes mellitus

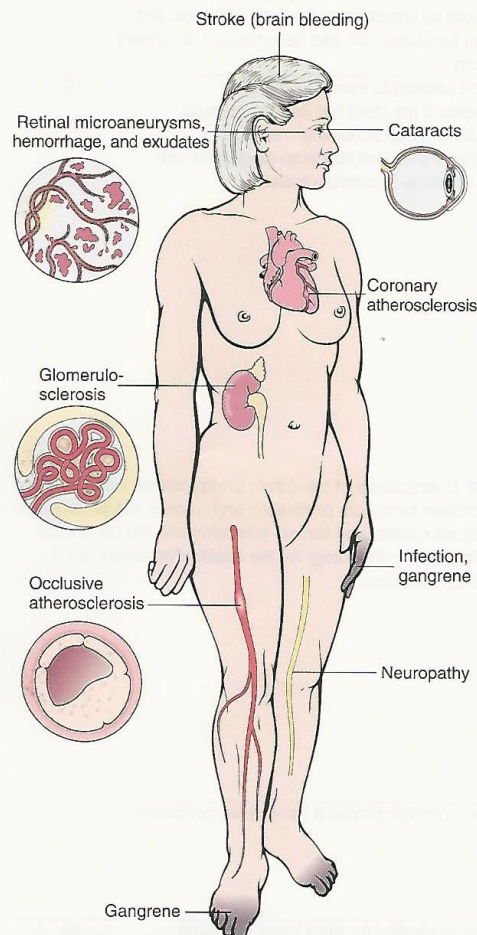
This disease results from the pancreas not producing any insulin (type I) or not producing enough insulin (type II).

# Indications/Contraindications for Massage Therapy

Massage for clients who have diabetes should be a supportive part of an overall treatment program. It should be performed under medical supervision. Impaired blood circulation, especially in the extremities, and neuropathy often accompany diabetes mellitus. The massage therapist should refer the client for immediate medical care if any tissue changes are noted. In pain management of diabetic neuropathy, gentle massage techniques can prove beneficial for short-term reduction of pain symptoms.

## Chapter Reference

6



**FIGURE B-7** Complications of diabetes mellitus. (From Damjanov I: *Pathology for the health professions*, ed 4, St Louis, 2012, Saunders.)



**Disease/Condition****Dislocation**

Dislocation is displacement of the bones of a joint; a subluxation is a partial dislocation.

**Indications/Contraindications for Massage Therapy**

Massage and bodywork are contraindicated locally over a trauma area until healing is complete. Massage methods are beneficial in supporting the rest of the body during the healing process, especially in managing compensation patterns caused by immobilizing the area. Massage and other forms of bodywork can also help manage secondary muscle tension.

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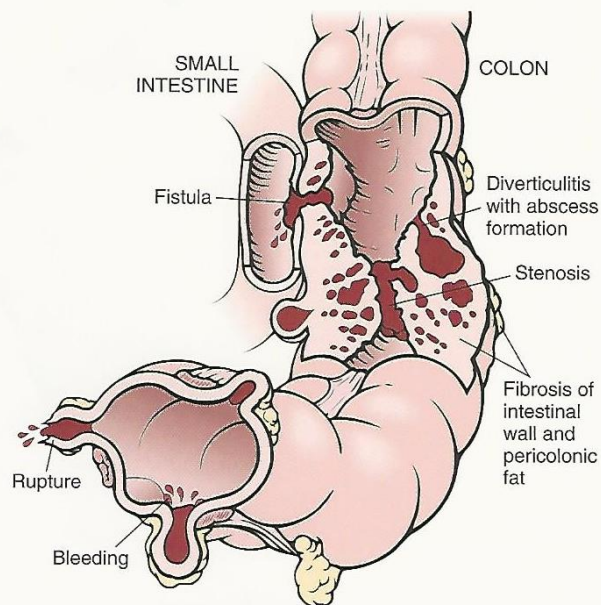
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**Diverticular disease**

Diverticula are small, saclike outpouchings of the intestinal wall in weak areas of the colon. Diverticulosis is the development of these pouches. Diverticulitis is inflammation caused by infection of these pouches. Abdominal pain or referred back pain may indicate gastrointestinal disorders, including diverticular disease.

clients should be referred to their physicians for proper diagnosis. If the client has been diagnosed with diverticulosis, deep abdominal massage is contraindicated. If the client has been diagnosed with diverticulitis, massage is contraindicated.

12



**FIGURE B-8** Diverticulosis of the colon. Complications include bleeding, abscess formation, perforation and rupture, fistula formation with adjacent structures, and fibrosis extending into the pericolic fat. (From Damjanov I: *Pathology for the health professions*, ed 3, St Louis, 2006, Saunders.)

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**Dupuytren's contracture**

This disorder results from the shrinking and thickening of the palmar fascia. The contracture pulls on the tendons of the ring finger and occasionally the little finger, causing them to be permanently flexed.

Local massage is contraindicated if it increases symptoms.

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**Edema**

In this condition excessive fluid accumulates within the interstitial spaces. Edema can be caused by electrolyte or protein imbalances or obstruction in the cardiovascular or lymphatic systems. With pitting edema tissues do not immediately spring back after being touched.

Massage is contraindicated for most types of edema.

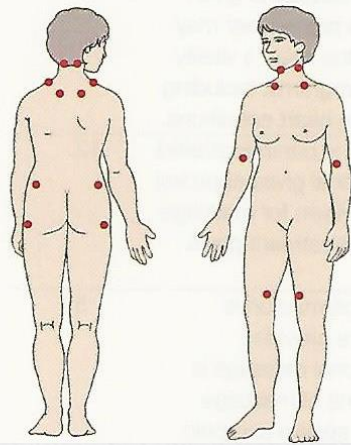
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However, edema resulting from subacute soft-tissue injury, standing for long periods of time, or short-term immobility can be alleviated by massage as long as there is no other factor contraindicating treatment application.

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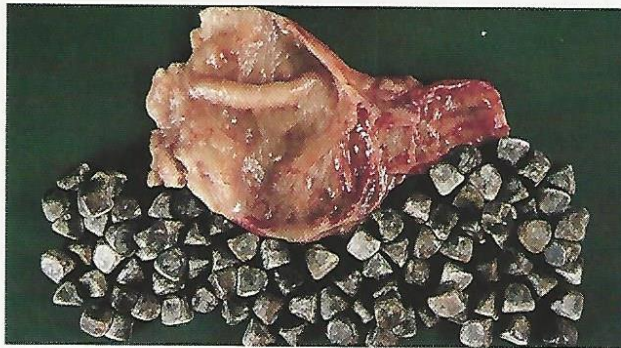
Disease/Condition	Indications/Contraindications for Massage Therapy	Chapter Reference
<b>Fibromyalgia</b> This syndrome causes symptoms of widespread pain or aching, persistent fatigue; generalized morning stiffness; nonrestorative sleep; and multiple tender points.	General massage approaches seem to work best to help reduce pain and restore sleep patterns. The client should avoid any form of therapy that causes therapeutic inflammation, including intense exercise and stretching programs, until healing mechanisms in the body are functioning. If tender points have been injected with antiinflammatory medications, anesthetics, or other substances, the practitioner should not massage over these areas.	9



**FIGURE B-9** Fibromyalgia tender points. (From Shiland BJ: *Mastering healthcare terminology*, ed 2, St Louis, 2006, Mosby.)

**Gallbladder disease (cholelithiasis)**

The disease almost always results from a gallstone composed of bile salts or cholesterol lodged in the cystic duct. Abdominal pain or referred back pain may indicate one of several gastrointestinal disorders.



**FIGURE B-10** Gallstones. (From Damjanov I: *Pathology for the health professions*, ed 4, St Louis, 2012, Saunders.)

**Headache**

Pain occurs in the forehead, eyes, jaw, temples, scalp, skull, occiput, or neck.

In such cases, referral is necessary for proper diagnosis.

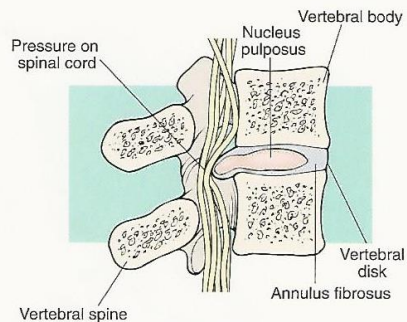
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Massage therapy is effective in treating muscle tension headache but much less so with migraine or cluster headaches. However, massage can relieve secondary muscle tension headache caused by the pain of the primary headache. Because headache is often stress induced, stress management in all forms usually is indicated for chronic headaches.

4



Disease/Condition	Indications/Contraindications for Massage Therapy	Chapter Reference
<b>Heart attack</b> A heart attack, also known as a <i>myocardial infarction</i> , is permanent damage to the myocardium caused by obstructed blood flow through the coronary arteries to the tissues.	Massage is contraindicated for clients recovering from recent heart attacks, but the gentle resting of hands on the body used in some forms of touch systems might be indicated with supervision. Once clients have completely recovered, if approval for massage is given by the client's health care provider, the practitioner may develop treatment plans according to the client's vitality. Comprehensive stress management programs, including therapeutic massage, can help manage heart conditions.	11
<b>Hepatitis</b> Hepatitis is an inflammation of the liver. It is usually, but not always, caused by viral infection. Acute hepatitis is contraindicated for massage.	Massage for clients with chronic hepatitis is contraindicated unless the client's health care professional gives approval and supervision. If approval and supervision for massage is given, the practitioner must develop treatment plans according to the client's vitality.	12
<b>Herniated disk</b> Herniated disk occurs when the fibrocartilage surrounding the intervertebral disk ruptures, releasing the nucleus pulposus.	Massage should not be performed until permission is given by the client's primary health care provider. Once permission has been given, regional massage is contraindicated. However, various forms of massage are important in managing the muscle spasm and pain surrounding the area of the herniated disk. The muscle spasms serve the stabilizing and protective function of guarding. Without some protective spasm, the nerve could be damaged further; however, too much muscle spasm increases the discomfort. The therapeutic treatment goals should be to reduce pain and excessive tension and restore moderate mobility while allowing the resourceful compensation produced by the muscle tension pattern.	5



**FIGURE B-11** Lateral view of a herniated disk, showing pressure on the spinal cord. (From Frazier MS, Drzymkowski JW: *Essentials of human diseases and conditions*, ed 4, St. Louis, 2008, Saunders.)

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**Hypertension**

This is the medical term for high blood pressure.

For borderline or mild hypertension, massage may be beneficial for managing stress and well being. However, if the hypertension is due to more serious conditions in the body, massage may be contraindicated. Hypertension that results from other cardiovascular diseases may be contraindicated for massage, but the gentle resting of hands on the body used in some forms of touch systems might be indicated with supervision.

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**Irritable bowel syndrome (IBS)**

IBS is also called *spastic*, or *irritable*, *colon*.

Most chronic gastrointestinal diseases, including IBS, have a strong correlation to stress. Comprehensive stress management programs, including therapeutic massage, can help manage these conditions.

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Disease/Condition	Indications/Contraindications for Massage Therapy	Chapter Reference
<p><b>Joint injuries</b></p> <p>Pain and swelling of joint injury can be overcome with the judicious and short-term use of pain medication, antiinflammatory medications, and appropriate rehabilitation exercise.</p>	<p>Massage, myofascial release, and trigger point work are often effective after the acute phase (2 to 3 days post injury). The application of ice along with rehabilitation exercise is beneficial. However, ice is contraindicated for some conditions and therefore should be used with caution. Management and rehabilitation of joint problems is a long-term process that often requires a multidisciplinary approach. Although direct work over an area that is actively healing is contraindicated unless supervised by the client's health care team, massage and other forms of soft-tissue work, coupled with movement therapies, can manage compensatory patterns that develop because of casting and other forms of immobilization.</p>	8



**FIGURE B-12** Joint injury. (From Marcotte AL, Osterman AL: Longitudinal radioulnar dissociation: identification and treatment of acute and chronic injuries, *Hand Clinics* 23(2): 195-208, 2007.)

### **Kidney failure**

See Renal failure.

### **Meningitis**

Meningitis is a bacterial or viral infection in the meninges, mainly in the subarachnoid fluid.

Because unusual or unexplained stiff neck is a symptom of encephalitis, clients with this condition should be immediately referred to their physicians for diagnosis. Infectious processes are contraindicated for massage.

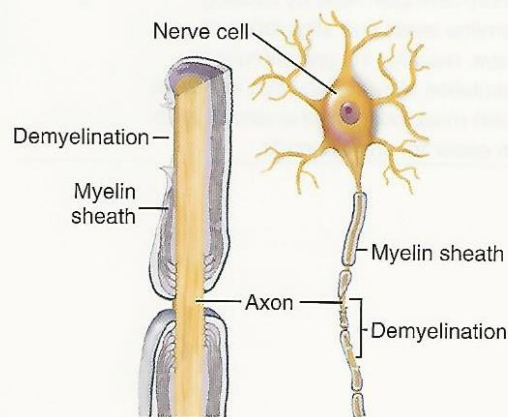
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### **Multiple sclerosis**

This involves the destruction of myelin sheaths around sensory and motor neurons in the central nervous system.

Supervised massage can be an effective part of a comprehensive long-term care program. Stress management also is an important component of an overall care program for any chronic disease. Massage and other forms of bodywork can help manage secondary muscle tension caused by the alteration of posture and the use of equipment such as wheelchairs, braces, and crutches. Treatments should be developed according to the client's vitality.

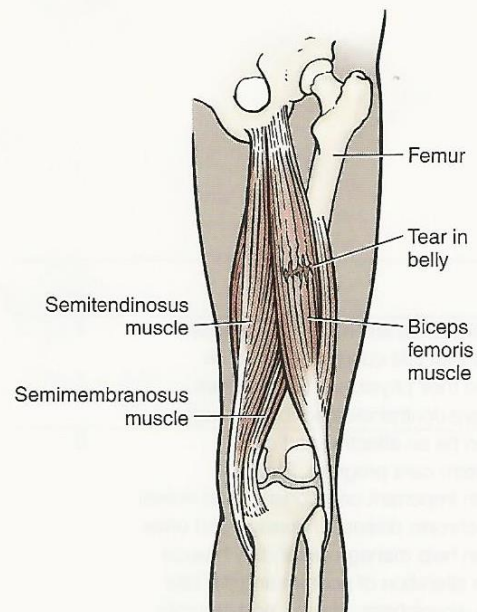
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**FIGURE B-13** Nerve sheath demyelination seen in multiple sclerosis. (From Shiland BJ: *Mastering healthcare terminology*, ed 3, St Louis, 2010, Mosby.)



Disease/Condition	Indications/Contraindications for Massage Therapy	Chapter Reference
<p><b>Muscle spasms (entrapment) and shortening</b></p> <p>Muscle spasms are involuntary contractions of skeletal muscle. They are considered to be low-intensity, long-lasting contractions. However, their contractions may compress nerves traveling through them. This is referred to as <i>entrapment</i>. Examples of entrapments include thoracic outlet syndrome and piriformis syndrome.</p>	<p>Various forms of massage are important in managing muscle spasms and pain. The muscle spasms may serve the stabilizing and protective function of guarding. Without some protective spasm, the nerve could be damaged further; however, too much muscle spasm increases the discomfort. The therapeutic treatment goals should be to reduce pain and excessive tension and restore moderate mobility while allowing the resourceful compensation produced by the muscle tension pattern. Because of the joint structures involved, therapeutic massage should be incorporated into a total treatment program with supervision by the appropriate health care professional.</p>	5
<p><b>Muscle strain</b></p> <p>Strain is an injury to skeletal muscles from overexertion or trauma and can range from mild to severe.</p>	<p>Direct work over the area of injury is contraindicated regionally until all signs of inflammation have dissipated. The use of ice and gentle range of motion can support healing. The therapeutic treatment goals should be to reduce pain and excessive tension caused by compensating postural distortions.</p>	9



**FIGURE B-14** Muscle strain. (From Fritz S: *Mosby's fundamentals of therapeutic massage*, ed 5, St. Louis, 2013, Mosby.)

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**Neuropathy**

Neuropathy is the inflammation or degeneration of the peripheral nerves. Nerve pain is difficult to manage and does not respond well to analgesics.

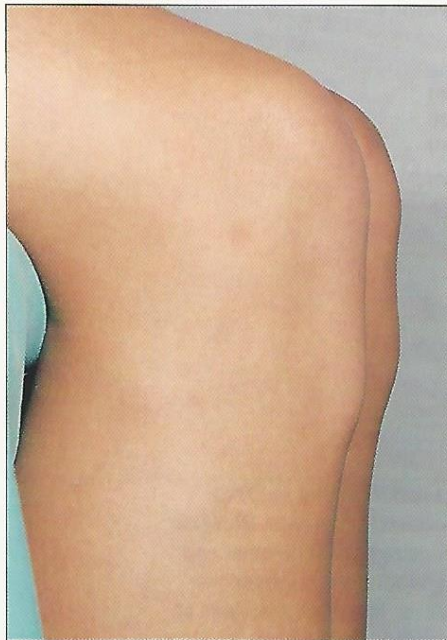
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Massage may provide short-term pain relief by causing changes in neurotransmitter levels and stimulation of alternate nerve pathways, resulting in hyperstimulation analgesia and counterirritation. Any therapy that increases mood-elevating and pain-modulating mechanisms makes coping with nerve pain easier for short periods.

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Disease/Condition	Indications/Contraindications for Massage Therapy	Chapter Reference
<b>Osgood-Schlatter disease</b> This disease occurs when the tibial tubercle becomes inflamed or separates from the tibia because of irritation caused by the patellar tendon pulling on the tubercle during periods of rapid growth or overuse of the quadriceps.	Regional massage may be contraindicated if inflammation or necrosis is present. Methods that relax and lengthen the muscle and soften the connective tissue are appropriate.	7



**FIGURE B-15** Osgood-Schlatter disease. (From Hochberg MC et al: *Rheumatology*, ed 4, Edinburgh, 2008, Mosby.)

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***Osteoarthritis***

A degenerative joint disease, osteoarthritis is the breakdown of joints caused by normal wear and tear.

Because the progression and flare-ups of the disease are often stress related, the generalized gentle stress reduction methods provided by massage therapy may be beneficial in long-term management of the condition, if supervised as part of a total care program. The practitioner should avoid frictioning techniques or any other forms of bodywork that cause inflammation.

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***Osteogenesis imperfecta***

This group of hereditary disorders appears in newborns and young children. The bones are deformed and fragile as a result of demineralization and defective formation of connective tissue. If skeletal problems create or are part of a permanent condition, supportive care is required.

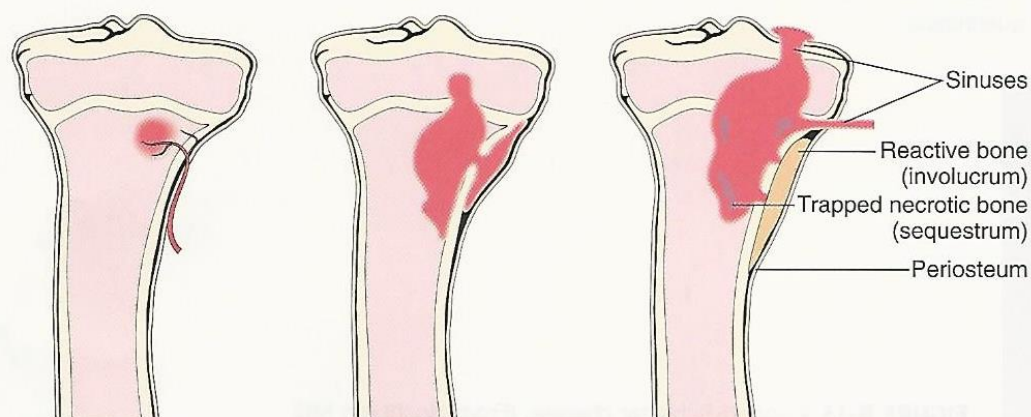
Massage methods are helpful in managing compensatory muscle spasms and connective tissue changes. Any type of compressive force or joint movement methods are contraindicated for a fragile skeletal structure, regardless of the cause, unless carefully supervised by the appropriate medical professionals. Light, superficial methods, such as resting the hands on the body, used in some forms of touch systems, might be indicated, again with supervision.

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Disease/Condition	Indications/Contraindications for Massage Therapy	Chapter Reference
<b>Osteomyelitis</b> Osteomyelitis is infection in the bone that most commonly affects children and adults older than age 50.	Because this is an infectious disease, massage is contraindicated until permission is given by the client's primary health care provider.	7



**FIGURE B-16** Osteomyelitis. The bacteria reach the metaphysis through the nutrient artery. Bacterial growth results in bone destruction and formation of an abscess. From the abscess cavity, the pus spreads. The pus destroys the bone and sequesters parts of it in the abscess cavity. Reactive new bone is formed around the focus of inflammation. (From Damjanov I: *Pathology for the health professions*, ed 4, St Louis, 2012, Saunders.)

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***Osteonecrosis (ischemic necrosis)***

Osteonecrosis is the death of a segment of bone, usually caused by insufficient blood flow to the area.

Necrosis usually is a localized condition that requires regional avoidance of the involved bone area. Because massage provides the generalized effect of enhanced local circulation, massaging around the edges of the affected area may be beneficial. However, massage is contraindicated unless supervised by the client's primary health care provider.

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***Osteoporosis***

This disorder is caused by loss of bone mass and density as a result of endocrine imbalances and poor calcium metabolism. The bones become depleted of calcium, other minerals, and protein.

A fragile skeletal structure, regardless of the cause, is a contraindication for any type of compressive force or joint movement methods. Light, superficial methods, such as gentle resting of the hands used in some forms of touch systems, might be indicated.

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***Paget's disease (osteitis deformans)***

This is a chronic disorder in which healthy bone is quickly reabsorbed and replaced with fibrous connective tissue that never completely calcifies.

A fragile skeletal structure, regardless of the cause, is a contraindication for any type of compressive force or joint movement methods. Light, superficial methods, such as gentle resting of the hands used in some forms of touch systems might be indicated.

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Disease/Condition

**Parkinson's disease**

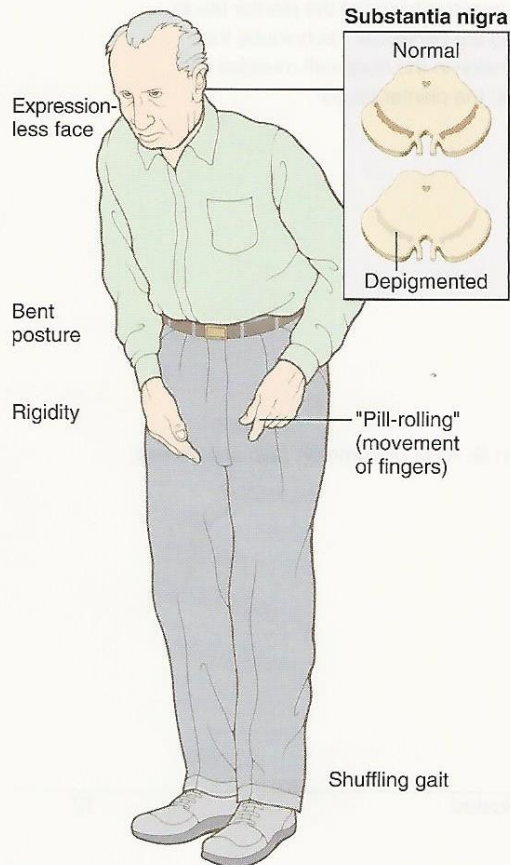
In this disease neurons that release the neurotransmitter dopamine in the brain degenerate, thus slowing or stopping its release.

Indications/Contraindications for Massage Therapy

Because massage has been shown to increase dopamine activity, its use is indicated for managing Parkinson's disease and tremor. In addition, massage therapy and other forms of soft-tissue manipulation may help manage secondary muscle tension.

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**FIGURE B-17** Signs and symptoms of Parkinson's disease. (From Damjanov I: *Pathology for the health professions*, ed 4, St Louis, 2012, Saunders.)

### **Peptic ulcer**

A gastric or duodenal ulcer affects the lining of the esophagus, stomach, or duodenum. Ulcers result from tissue damage that never heals because of constant irritation or because healing mechanisms are impeded.




Deep abdominal massage is contraindicated for clients with peptic ulcers. Most chronic gastrointestinal diseases have a strong correlation to stress. Comprehensive stress management programs, including therapeutic massage methods, are often effective in managing stress.

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**FIGURE B-18** Peptic ulcer. (From Damjanov I: *Pathology for the health professions*, ed 4, St Louis, 2012, Saunders.)



Disease/Condition	Indications/Contraindications for Massage Therapy	Chapter Reference
<b>Piriformis syndrome</b> In this syndrome a hypertonic piriformis muscle compresses the sciatic nerve passing through it, resulting in sciatica-like symptoms.	Massage methods help relieve muscle entrapment of the nerve by relaxing and lengthening the muscles.	9
<b>Plantar fasciitis</b> The condition results from repeated microscopic injury to the plantar fascia and surrounding myofascial structures. Acute-phase plantar fasciitis responds to rest and ice.	After the inflammation has diminished, soft-tissue methods that address the connective tissue of the plantar fascia and gentle stretching are beneficial. Techniques that release muscular tension in the deep calf muscles can help reduce strain on the plantar fascia.	9
<div data-bbox="349 472 683 1048">  </div> <p><b>FIGURE B-19</b> Plantar fasciitis. (From Waldman S: <i>Atlas of common pain syndromes</i>, Philadelphia, 2002, Saunders.)</p>		
<b>Preeclampsia</b> Also termed <i>pregnancy-induced hypertension</i> or <i>toxemia</i> , the condition is a complication of pregnancy characterized by increasing hypertension, protein in the urine, and edema.	Massage is contraindicated.	12
<b>Renal failure</b> Also known as <i>kidney failure</i> , this disorder involves the inability of the kidneys to function normally. It may be acute or chronic, and it can be life threatening.	Massage therapy is contraindicated for both acute and chronic renal failure.	12

**Disease/Condition**

**Rheumatoid arthritis**

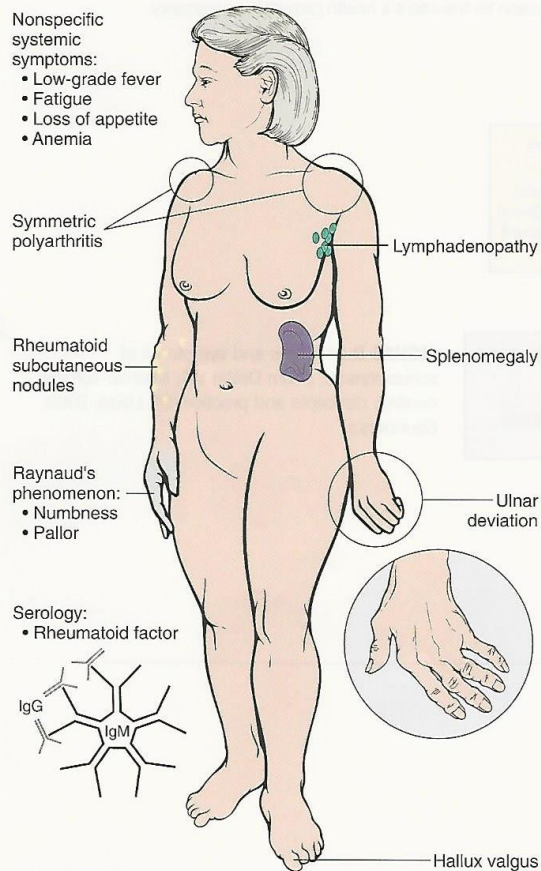
This crippling condition is characterized by swelling of the joints in the hands, feet, and other parts of the body as a result of inflammation and overgrowth of the synovial membranes and other joint tissues.

**Indications/Contraindications for Massage Therapy**

Because the progression and flare-ups of the disease are often stress related, generalized gentle stress reduction massage may be beneficial in long-term management of the condition, if supervised as part of a total care program. The practitioner should avoid frictioning techniques or any other forms of bodywork that cause inflammation.

**Chapter Reference**

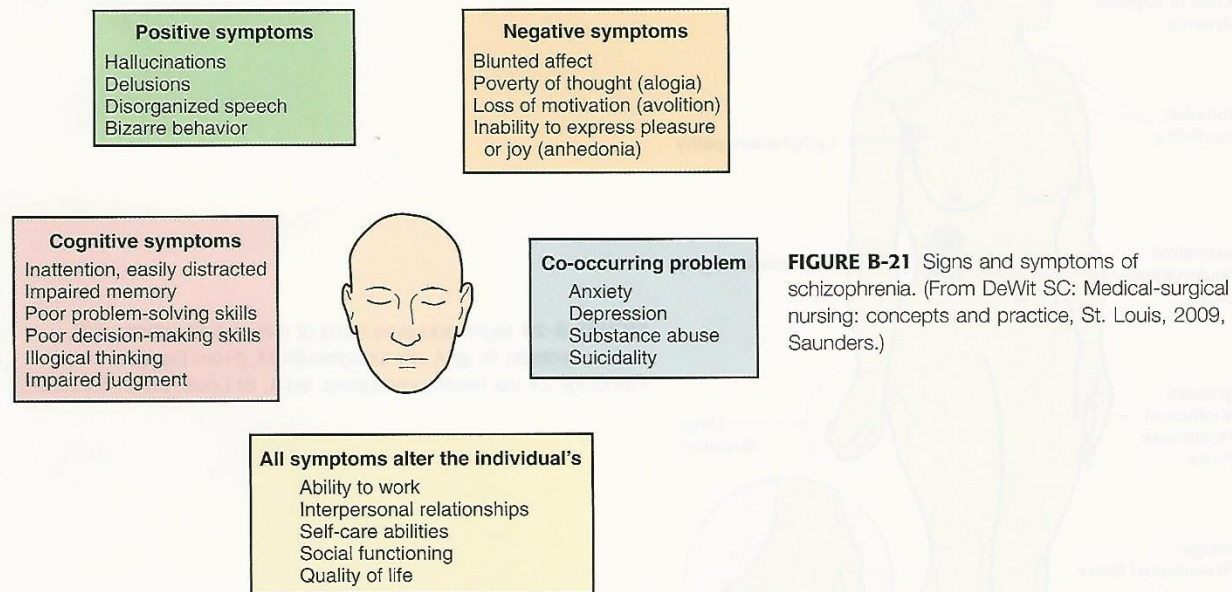
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**FIGURE B-20** Signs and symptoms of rheumatoid arthritis. *IgG*, Immunoglobulin G; *IgM*, immunoglobulin M. (From Damjanov I: *Pathology for the health professions*, ed 4, St Louis, 2012, Saunders.)



Disease/Condition	Indications/Contraindications for Massage Therapy	Chapter Reference
<b>Rotator cuff tear</b> Tears often are caused by repeated impingement, overuse, or other conditions that weaken the rotator cuff and eventually cause partial or complete tears.	Massage techniques applied to acute myofascial tears are contraindicated. However, massage therapy may be indicated in the rehabilitative process and as part of a supervised treatment protocol. Massage may be able to help manage and improve compensatory patterns.	9
<b>Schizophrenia</b> Schizophrenia is the most common mental disorder and includes a large group of psychotic disorders characterized by gross distortion of reality; disturbances of language and communication; withdrawal from social interaction; and disorganization and fragmentation of thought, perception, and emotional reaction.	Therapeutic massage may be supportive in a multidisciplinary approach to treatment because such methods influence neurotransmitters. However, supervision by the client's health provider is necessary.	4



**FIGURE B-21** Signs and symptoms of schizophrenia. (From DeWit SC: Medical-surgical nursing: concepts and practice, St. Louis, 2009, Saunders.)

**Disease/Condition**

**Spinal cord injury**

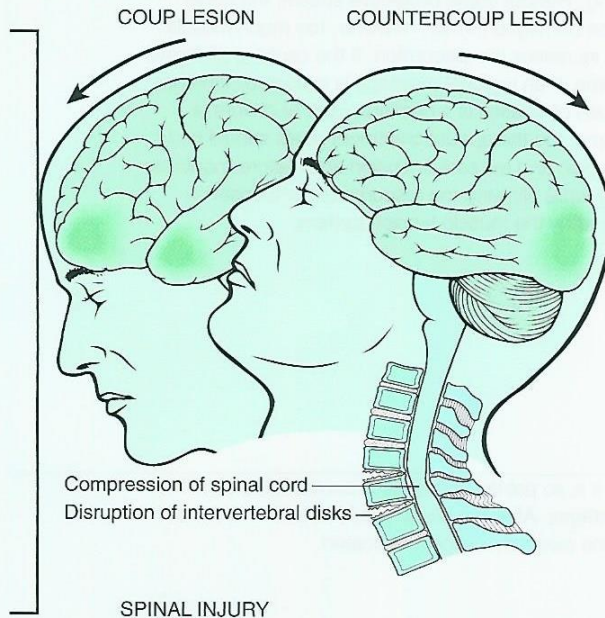
Spinal cord injury involves damage to the spinal cord. The damage usually results from trauma but can also result from tumors or bony growths in the spinal canal. Loss of motor function in the lower extremities is paraplegia; loss of motor function in both the upper and lower extremities is quadriplegia.

**Indications/Contraindications for Massage Therapy**

Massage is an effective part of a comprehensive, supervised rehabilitation and long-term care program. Massage and other forms of bodywork can help manage secondary muscle tension resulting from the alteration of posture and the use of equipment such as wheelchairs, braces, and crutches. Specifically focused massage can help manage difficulties with bowel paralysis. Because massage increases local blood flow, it can help prevent or manage decubitus ulcers.

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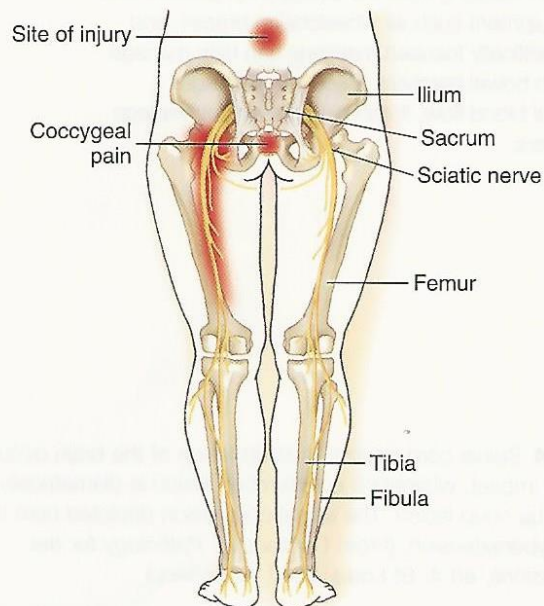


**FIGURE B-24** Spinal cord trauma. A coup lesion of the brain occurs at the site of impact, whereas a countercoup lesion is diametrically opposite to the coup lesion. The spinal cord lesion depicted here is caused by hyperextension. (From Damjanov I: *Pathology for the health professions*, ed 4, St Louis, 2012, Saunders.)



**Disease/Condition****Sciatica**

This is inflammation of the sciatic nerve. It originates in the low back or hip and radiates down the leg.



**FIGURE B-22** Sciatica. (From Shiland BJ: *Mastering healthcare terminology*, ed 3, St Louis, 2010, Mosby.)

**Indications/Contraindications for Massage Therapy**

Massage treatments should be developed on the basis of the cause of sciatica. If it is caused by a herniated disk, massage should not be performed until permission is given by the client's primary health care provider. Once permission has been given, regional massage is contraindicated. However, various forms of massage are important in managing the muscle spasm and pain surrounding the area of the herniated disk. The muscle spasms serve the stabilizing and protective function of guarding. Without some protective spasm, the nerve could be damaged further; however, too much muscle spasm increases the discomfort. If the cause is piriformis syndrome, then regional massage is indicated. Whether the cause of sciatica is a herniated disk or piriformis syndrome, the therapeutic treatment goals should be to reduce pain and excessive tension and restore moderate mobility while allowing the resourceful compensation produced by the muscle tension pattern.

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### **Shingles**

This is a painful outbreak of the herpes zoster virus along sensory neurons. Herpes zoster is the same virus that causes chickenpox. After an episode of chickenpox, the virus retreats to the dorsal root ganglia, where the immune system usually keeps it in check. Sometimes, however, the virus is able to overcome the immune system, and shingles result. Blisters form along the peripheral nerves associated with the dorsal root ganglia that house the virus.

Because it is so painful, massage is contraindicated in the acute stages. After the blisters have healed and the pain has gone away, massage is indicated.

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**FIGURE B-23** Shingles. (From Habib T: *Clinical dermatology*, ed 4, St. Louis, 2004, Mosby.)



# Disease/Condition

## Stroke

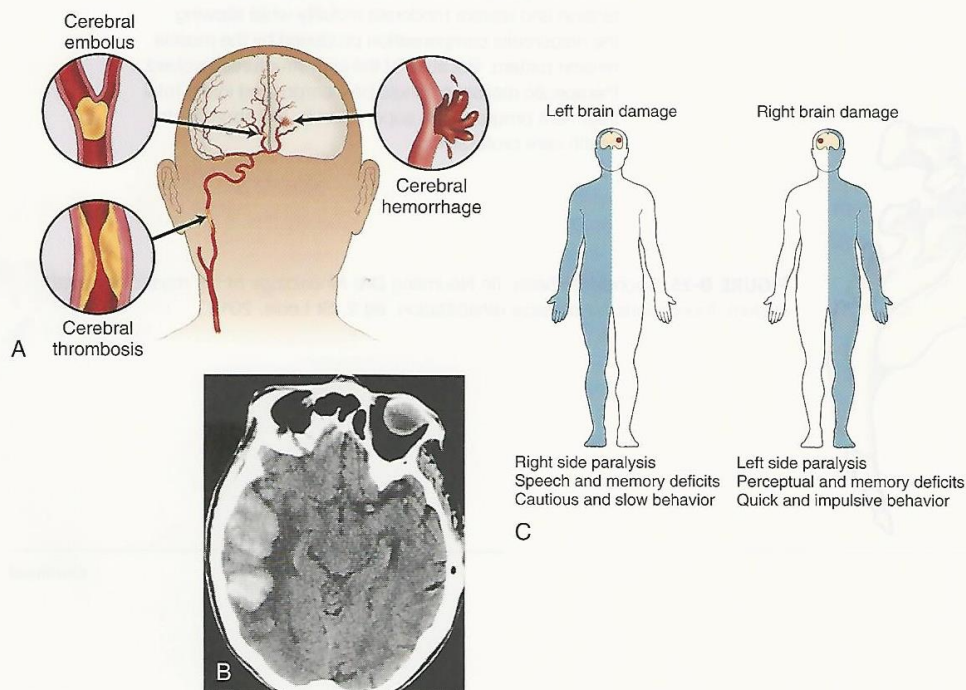
Stroke is sudden loss of neurologic function caused by a vascular injury to the brain. The interrupted blood supply causes brain tissue to die. Stroke is a medical emergency requiring immediate referral.

# Indications/Contraindications for Massage Therapy

Once the client is recovering, massage and bodywork can be an effective part of a supervised comprehensive care program. Massage and other forms of bodywork can help manage secondary muscle tension resulting from the alteration of posture and the use of equipment such as wheelchairs, braces, and crutches.

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**FIGURE B-26** Cerebrovascular accident (CVA). **A**, Events causing stroke. **B**, Magnetic resonance imaging showing hemorrhagic stroke in right cerebrum. **C**, Areas of the body affected by CVA. (**A,C** from Shiland BJ: *Mastering healthcare terminology*, ed 3, St Louis, 2010, Mosby; **B** from Black J: *Medical-surgical nursing*, ed 8, St. Louis, 2009, Saunders.)

#### Disease/Condition

##### **Spondylolisthesis**

In this condition a vertebra becomes displaced anteriorly. It can occur almost anywhere on the spine, but it happens most often in the lower spine.

#### Indications/Contraindications for Massage Therapy

Various forms of massage are important in managing the muscle spasm and pain in the accompanying backache. The muscle spasms serve the stabilizing and protective function of guarding. Without some protective spasm, the nerve could be damaged further; however, too much muscle spasm increases the discomfort. The therapeutic treatment goals should be to reduce pain and excessive tension and restore moderate mobility while allowing the resourceful compensation produced by the muscle tension pattern. Because of the joint structures involved, therapeutic massage should be incorporated into a total treatment program with supervision by the appropriate health care professional.

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**FIGURE B-25** Spondylolisthesis. (In Neumann DA: *Kinesiology of the musculoskeletal system: foundations for physical rehabilitation*, ed 2, St Louis, 2010.)



## Disease/Condition

### ***Tendinitis/tenosynovitis***

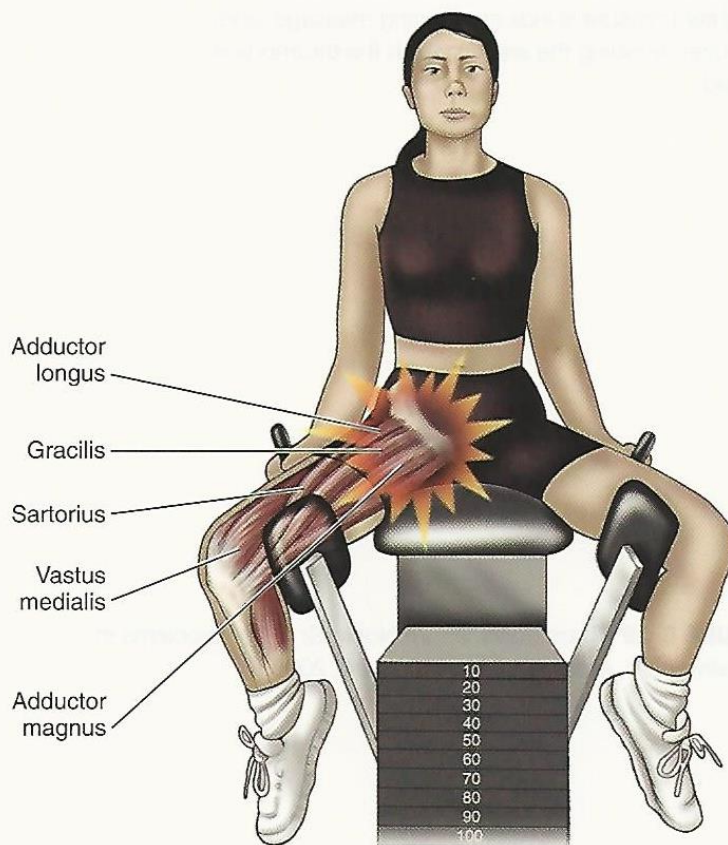
Tendinitis is inflammation of a tendon; tenosynovitis is inflammation of a tendon sheath.

## Indications/Contraindications for Massage Therapy

Any massage methods that increase the inflammatory response are contraindicated. In the acute phase the use of ice and gentle movement are indicated. Chronic conditions may benefit from methods that elongate the connective tissue structures, relieving the irritation that caused the inflammation in the area.

## Reference

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**FIGURE B-27** Tendinitis/tenosynovitis. (From Waldman S: *Atlas of uncommon pain syndromes*, ed 2, Philadelphia, 2008, Saunders.)

**Thoracic outlet syndrome**

This syndrome occurs when the brachial plexus and blood supply of the arm become entrapped, resulting in shooting pains, weakness, and numbness.



Massage methods help relieve muscle entrapment of nerves by relaxing and lengthening the muscles.

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**FIGURE B-28** Thoracic outlet syndrome. (From Lederman RJ: Peripheral neuropathies in instrumental musicians, *Phys Med Rehab North Am* 17(4): 761-779, 2006.)

*Continued*



#### Disease/Condition

##### **Thrombosis**

A thrombus is a blood clot. The process of forming a clot in an unbroken blood vessel is called *thrombosis*. A blood clot, bubble of air, fat from broken bones, or a piece of debris transported by the bloodstream is called an *embolus*. When an embolus becomes lodged in a blood vessel smaller in diameter than it is, this situation is called an *embolism*. For example, an embolus that becomes lodged in the lungs is called a *pulmonary embolism*. The major danger of thrombosis and embolisms is that they block vital blood flow to tissues. A common place for thrombosis is in the lower extremities because gravity impedes venous return. This is called a *deep venous thrombosis* (DVT), and it may cause inflammation in the tissues.



#### Indications/Contraindications for Massage Therapy

Massage therapy is contraindicated regionally and possibly generally because of the pain associated with thrombosis and because massage can further damage debilitated tissues.

Clients who are prone to thrombosis take anti-coagulant medications such as heparin or warfarin. These medications made the client more susceptible to bruising so lighter pressure is indicated during massage, and, of course, avoiding the area in which the thrombus is located.

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**FIGURE B-29** Thrombosis. (From Noble S: Other problems in palliative care, *Medicine* 36(2): 100-104, 2008.)

**Disease/Condition**

***Torticollis***

Also called *wry neck*, this condition involves a spasm or shortening of one of the sternocleidomastoid muscles.

**Indications/Contraindications for Massage Therapy**

Management of torticollis with massage therapy involves relaxing the neck, releasing trigger points, stretching the contracted muscles, and improving range of motion. Pressure on the blood vessels and nerves deep to the sternocleidomastoid should be avoided.

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**FIGURE B-30** Torticollis in 18-year-old girl. (From Tachdjian MO: *Pediatric orthopedics*, p. 68, Philadelphia, 1972, Saunders.)



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**Vertigo**

Vertigo is the sensation that the body or environment is spinning or swaying.

Movement therapies can help or aggravate vertigo; therefore the practitioner must take care to design an individual therapeutic program on the basis of the client's history. Massage methods can deal effectively with muscle tension and diminish anxiety and nausea, but the benefit is temporary because the symptoms return with a recurrence of vertigo.

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**Whiplash**

Whiplash is an injury to the soft tissues of the neck caused by sudden hyperextension or flexion (or both) of the neck.

Massage treatment during the acute phase is contraindicated unless closely supervised by a physician or other qualified health care professional. Massage methods are valuable as part of rehabilitation in the subacute phase and can help restore function if the condition is chronic. Extension injury is more severe and requires more carefully applied massage techniques.

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