Massage & Pathology: 
Top 10 Diseases
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Massage therapy is a method of manipulating soft tissue using pressure & traction (Ernst, Pittler, Wider, & Boddy, 2006). Massage therapy is one of the oldest & most popular forms of complementary/alternative treatments in the United States (National Institutes of Health, 2012). Common diseases in the U. S> include osteoarthritis (OA); manifestations of atherosclerosis, such as coronary, cerebrovascular, & peripheral arterial diseases (& their complications, such as heart attack, stroke, & aneurysms); diabetes mellitus type 2; Alzheimer disease; cancer; mood disorders; & chronic obstructive pulmonary disease (COPD), such as chronic bronchitis & emphysema (Centers for Disease Control & Prevention, 2016; Pfunter, Wier, & Stocks, 2013). Fifty percent of adults with chronic conditions have multiple chronic conditions (Gritz, J. R., 2015).

OSTEOARTHRITIS

OA is characterized by inflammation of the joint capsule & progressive joint damage, leading to loss of articular cartilage. OA is common in elderly adults & almost universal in persons older than 75 years old. It affects both peripheral joints of the hands, wrists, knees, feet, as well as central joints, such as the hips & spine. OA is also called degenerative joint disease, degenerative arthritis, and wear & tear arthritis. In severe cases, surgery is used to repair or replace affected joints.

Massage therapy. Position the client for comfort. Inquire about sensitivity over joints affected by OA & adjust pressure accordingly. Cold or moist heat applications may be used on affected areas to manage pain. Movements of the spine or hip should be omitted because of the deteriorating effect the disease has on these joints. Massage decreased pain & stiffness (Atkins & Eichler, 2013; Perlman, Sabina, Williams, Njike, & Katz, 2006) & improved function (Perlman et al., 2006) in persons with OA of the knee; self-massage also improved knee function (Atkins & Eichler, 2013). In persons with OA of the hand, massage therapy decreased pain & stiffness, increased grip strength, & decreased anxiety & depression (Field, Diego, Hernandez-Reif, & Shea, 2007). The Arthritis Foundation recommends massage therapy to reduce pain & improve function in joints affected by arthritis (Bernstein, 2016).

Joint Replacement: When therapy does not alleviate pain & dysfunction, surgical repair & replacement of a joint, called arthroplasty, may be needed. Knees & hips are the two most common joints replaced.

Massage therapy. Massage therapy can begin after major surgery once the client is medically stable. Medical stability occurs when vital signs (such as, pulse, temperature, & blood pressure) are within normal limits, the client is conscious & comfortable, & the prognosis is good to excellent. Be sure to communicate with the patient care coordinator if the client is still under medical supervision & follow his/her directives. Position the client for comfort. A side-lying position may be needed to avoid pressure on areas containing recent incisions, drain tubes, or recently implanted medical devices, such as catheters or pacemakers. Avoid vigorous massage techniques on the lower extremities (thighs & legs) for 12 weeks after surgery. This restriction is because of the increased risk of blood clots, which could last up to 3 months (Sweetland et al., 2009). Although use of prophylactic anticoagulants (such as, low-molecular-weight heparin, warfarin, & aspirin) to mitigate the risk of blood clots are commonplace today (Bass, 2015), avoiding vigorous massage on lower extremities for 12 weeks after major surgery is a precautionary measure. The incision should be avoided until it has completely healed (area is clean & dry; not moist or open) & the 12-week window has passed for incisions on the lower extremities.

**ATHEROSCLEROSIS**

Atherosclerosis is presence of plaque within arteries that can restrict blood flow & promote clot formation. Rather than a single disease, atherosclerosis is a pathologic process that leads to many other diseases, such as (1) **coronary artery disease** or atherosclerosis of coronary arteries, (2) **cerebrovascular disease** or atherosclerosis of cerebral arteries, & (3) **aortic abdominal aneurysm** or atherosclerosis of the abdominal aorta.

**Coronary Artery Disease:** Coronary artery disease is caused by plaque within the arteries that supply the heart. Clients taking cardiovascular agents (i.e., anticoagulants, antihypertensives) may be prone to dizziness, bruising, drug-induced headaches, & severe muscle & joint pain. One of the most serious complications is a heart attack or sudden disruption in blood flow.

**Massage therapy.** If your client feels dizzy or lightheaded (orthostatic or postural hypotension) while sitting up or standing after the massage, ask him or her to sit upright & remain in the seated position until the feeling of dizziness has subsided before standing & walking. This may take as long as 3 minutes. You can also reduce the degree of postural change by using a more upright or semireclining position during the massage to prevent or reduce orthostatic hypotension. Clients may be bruised if prolonged pressure or manually-aggressive techniques are used. Be sure to inform the client of this risk when obtaining consent & comply with the client’s request to proceed or not to have these types of techniques performed. Drug-induced headache may return quickly. If relief from headaches is one of your client’s treatment goals, be sure this information is conveyed to the client & reflected in your treatment plan. If your client is taking lipid-lowering drugs, be mindful of serious side effects, including severe muscle & joint pain, which require immediate medical evaluation.

**First Aid Measures for Heart Attack:** The acute care principle is time is muscle. Some signs & symptoms of heart attack are chest pain, which may be described as crushing, burning, viselike, heaviness, or fullness; discomfort in other areas of the upper body, such as the left arm, shoulder, neck, or jaw; shortness of breath, profuse sweating, fatigue, or dizziness; nausea & indigestion (more common in women); & anxiety, fear, or foreboding. If the victim complains of chest pain that lasts more than a few minutes, especially with the other signs listed above, call 911. If the victim becomes unconscious &/or nonresponsive, he or she may be in sudden cardiac arrest & will die unless the heart returns to its normal rhythm, so take action. If you are alone, call 911 & get an automated external defibrillator (AED) yourself. If you are not alone, send someone to call 911 & to get an AED. Use the AED as directed. If you are trained in cardiopulmonary resuscitation (CPR) & an AED is unavailable, follow proper protocols. If you are not trained in CPR & an AED is unavailable, follow the steps below if the victim is an adult (the American Heart Association [AHA] classifies adults as persons older than 8 years old). Ideally, the victim is laying on a firm surface, such as the floor or the ground. CPR is applied best over skin; the skin of your hand over the skin of the victim’s sternum.

1. Place the heel of one hand on the center of the victim’s chest. Place the other hand on top of the first hand with fingers interlaced.

2. Push down into the victim’s chest hard & fast. Press into the chest at least 2 inches, & allow time for it to rise before each compression. Be sure your elbows are locked & your shoulders are directly over your hands. Do not break contact between compressions. Your compression rate should be approximately 100 to 120 per minute.

3. Continue compressions until (1) the victim starts breathing, (2) someone arrives who can help with CPR, (3) an AED arrives & is used, or (4) you pass out from exhaustion.

**Cerebrovascular Disease:** Cerebrovascular disease is caused by plaque within the arteries that supply the brain. The most serious complication is a stroke or a sudden disruption in cerebral blood flow.

**Massage therapy.** Inquire about positions that are most comfortable for the client if they are a stroke survivor. If the client uses a wheelchair, the massage might be performed while the client is in the chair. Avoid using aggressively-applied passive
stretches & joint movements because of the possibility of reduced bone integrity if the client has been inactive for prolonged periods. Massage therapy appears to reduce pain, promote relaxation (Lämås, Häger, Lindgren, Wester, & Brulin, 2016; Mok & Woo, 2004), decrease anxiety, & improve sensorimotor functions & quality of life in individuals after stroke (Lämås et al., 2016). Massage therapy & Thai massage decreased anxiety in elderly stroke patients (Mok & Woo, 2004; Thanakiatpinyo et al., 2014). Thai massage & acupressure reduced depression, increased functional ability & activities of daily living, & improved quality of life in stroke patients (Kang, Sok, & Kang, 2009; Thanakiatpinyo et al., 2014).

First Aid Measures for Stroke: The acute care principle is time is brain. It is important to know the signs of stroke. To learn & remember these signs & what to do, use the acronym FAST, which stands for:

- **Face**: Ask the person to smile. If one side of the face drops, it is a sign of stroke.
- **Arms**: Ask the person to raise both arms. If one arm drifts downward, it is a sign of stroke.
- **Speech**: Ask the person to repeat a simple phrase, such as “Is it sunny outside?” If speech is slurred or strange, this is a sign of stroke.
- **Time**: If any of the aforementioned signs are observed, call 911 immediately. The quicker they get to the hospital, the more likely that treatment will be able to completely reverse the stroke’s effect.

Decubitus Ulcers: Decubitus ulcers are localized injury to the skin &/or underlying tissues from sustained pressure. They are usually over a bony prominence. Individuals who are immobile are at higher risk for decubitus ulcers, such as those who are bedridden or confined to a chair.

Massage therapy. Local massage is contraindicated over areas at risk for ulcer formation. At-risk areas for **bedridden clients** are the back of the head, over the scapula, the elbows, the sacrum, & over the heels. At-risk areas for **chair-bound clients** are over the scapula, the hips & coccyx, the ischial tuberosities, the popliteal areas, & heels/plantar surfaces of the feet. The therapist cannot rely on assessment to determine the presence of developing decubitus ulcers, because the client may have inflammation presenting as nonblanching skin that is difficult to observe, particularly in individuals with darker skin. Furthermore, the National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel, & Pan Pacific Pressure Injury Alliance (2014) state that massage or vigorous rubbing should not be used over skin that is at risk for developing pressure ulcers, because it is painful & may cause further tissue damage or promote inflammatory reactions, especially in frail older adults. Guy (2011) & Shahin, Dassen, & Halfens (2009) also advised to avoid at-risk areas, because massage pressure may serve to exacerbate local tissue damage.

Cautionary Sites: Areas where deep vigorous techniques & prolonged deep pressure is avoided because the area contains superficial blood vessels &/or nerves. Two primary cautionary sites are the anterior neck & the abdomen.

**Anterior neck.** Avoid deep vigorous techniques & prolonged deep pressure on the anterior neck, because it can damage structures located in this area. Massage to the anterior neck was found to cause carotid artery dissection when an electric handheld device was used (Grant & Wang, 2004) & when massage tools were used (Liu, Tsai, & Chang, 1993). In addition, massage in this area damaged the thyroid & contributed to the development of destructive thyrotoxicosis (Tachi, Amino, & Miyai, 1990). Posadzki & Ernst (2013) conducted a systematic review of massage safety & found that the anterior neck or throat is commonly associated with serious adverse effects, including stroke.

**Abdomen.** Avoid deep vigorous techniques & prolonged deep pressure over the abdomen, because it could damage structures located within the abdominal cavity. Deep massage to the abdomen was identified as the cause of hepatic hematoma in a woman with no history of liver or bleeding disorders (Trotter, 1999) & likely caused cystic rupture & hemorrhage of the bladder in a man diagnosed with polycystic kidney disease (Mufarrij & Hitti, 2011), as well as displacement of a ureteral stent (Kerr, 1997). Additionally, increasing numbers of individuals in the United States have abdominal aorta aneurysms (AAAs). Deep vigorous
techniques & prolonged deep pressure may damage blood vessels. Most AAAs are asymptomatic; & therefore, the therapists cannot rely on prior diagnosis before exercising caution.

**DIABETES MELLITUS TYPE 2**

Diabetes mellitus type 2 is characterized by chronic elevated blood glucose levels caused by resistance to insulin by the cells. In rare cases, the body does not produce enough insulin.

**Massage therapy.** Ask the client if he or she carries a glucose meter & glucose tablets or gel. If so, ask where they are in case they are needed during a hypoglycemic episode.

Massage was found to decrease glucose levels to within normal range in children (Field, Hernandez-Reif, LaGreca, et al., 1997; Sajedi, Kashaninia, Hoseinzadeh, & Abedinipoor, 2011). Children experienced increased dietary compliance when massaged by their parents (Field et al., 1997). An interesting finding in the aforementioned study was that anxiety & depression decreased in children & parents from the massage experience. Pandey, Tripathi, Pandey, Srivatava, & Goswami (2011) conducted a systematic review of the literature & supported the use of massage to help manage diabetes, including normalizing blood glucose levels, reducing symptoms of peripheral neuropathy, reducing tension, & promoting relaxation.

Clients who have diabetes type 1 (insulin dependent), and some clients with type 2 require insulin. If this is the case, avoid vigorous massage & heat/ice applications over sites of recent insulin injection for 24 hours. Massage therapy was found to increase insulin absorption administered by subcutaneous injection (Berger, Cüppers, Hegner, Jörgens, & Berchtold, 1982; Linde, 1986). The increased absorption produced by massage could cause or contribute to complications, such as hypoglycemia. For drug pumps, avoid vigorous massage & heat/ice applications over the infusion site for 24 hours after drug delivery. Do not get massage lubricant on the sensor, transmitter, pump, or its tubing. For added comfort, offer your client a soft cushion to place over the pump while lying prone if needed.

Complications can arise after the onset of diabetes, especially if it is not managed & blood glucose levels stay consistently high, which is called hyperglycemia. Examples of diabetic complications are neuropathy, ulcers, atherosclerosis, diabetic retinopathy, kidney & heart diseases, & fungal infections. Be sure to query the client about diabetic complications & modify your massage accordingly.

**Hypoglycemia:** Hypoglycemia is low blood sugar that ranges between 45 to 60 mg/dL. Hypoglycemia can occur in all types of diabetes mellitus, but it is more common in type 1 or when type 2 requires insulin. The major cause of hypoglycemia in diabetic persons is an overdose of prescribed insulin; the second major cause is eating too little food. Signs & symptoms of hypoglycemia are mental confusion, disorientation, & slurred speech; visual disturbances; cool, clammy, pale skin; & tremors, seizures, & loss of consciousness (though uncommon). If left untreated, hypoglycemia can develop into insulin shock, which may lead to coma & death.

**First Aid Measures for Hypoglycemia.** If the client is conscious & coherent:

1. Give the client a substance that contains sugar, such as the contents of a honey packet, cake frosting in a tube, 4 oz of orange juice, or 6 oz of regular (not diet) soda.

2. Repeat this step after 10 minutes if your client does not claim to feel better.

3. When the client feels better, feed him or her snacks that includes complex carbohydrates & protein, such as fruit or crackers with cheese or peanut butter.

*If the client does not feel better, becomes unconscious, or if giving anything by mouth is unsafe, call 911.*
If you are uncertain whether the person is hypoglycemic or hyperglycemic (high blood sugar), provide a substance that contains sugar anyway, because hypoglycemia is a more serious condition.

**ALZHEIMER DISEASE**

Alzheimer disease is a progressive neurodegenerative disease that produces a typical profile of mental deterioration & affects processes of thinking, memory, & communicating.

**Massage therapy.** Tailor the massage to the stage of disease, with very few adjustments needed in earlier stages to significant modifications for later stages. Tolerance of behavior is needed, given that these individuals experience personality changes. Consider consulting a person with whom the client is familiar in case he or she becomes disoriented & anxious. Many persons with Alzheimer disease become agitated when confronted about their confabulations or confusion, especially if they are constantly redirected or reoriented. Again, family members or friends of the client are a good information source to find ways to handle these situations. Later-stage adjustments may include massage using light pressure & slower speed. These adjustments are even more appropriate when the client’s physical condition & ability to communicate deteriorate.

Hand massage combined with calming music reduced agitation in persons with dementia (Remington, 2002). Touch-based therapies (such as, healing touch & therapeutic touch) reduced restlessness & vocalizations (Woods, Beck, & Sinha, 2009; Woods, Craven, & Whitney, 2005), & reduced stress in persons with dementia (Woods et al., 2009). Rowe & Alfred (1999) did not find reduced vocalizations, which were found in the studies by Woods et al. (2005; 2009). However, this study did support the use of massage to decrease behaviors, such as pacing, wandering, & resistance. Massage also decreased aggressiveness in persons with Alzheimer disease (Cohen-Mansfield, 2013).

**CANCER**

Cancer is characterized by abnormal cells possessing specific qualities, including uncontrolled cell division, lack of programmed cell death, can spread or metastasize, & the ability to gather into masses called tumors.

**Massage therapy. General recommendation:** Be sure to screen for deep vein thrombosis by looking for signs and symptoms, which are calf pain, swelling, warmth, redness, and tenderness. If the client has any of these signs or symptoms, postpone the massage and refer the client to the appropriate health care provider for evaluation and treatment. Clients undergoing cancer treatment may be hypersensitive to certain odors. Only unscented lubricants are indicated.

**Cancer-related Surgery:** Surgery is commonly used to remove tumors, involved organs, & neighboring lymph nodes. Massage & acupuncture in addition to standard medical care decreased pain & depressive mood among postoperative cancer patients compared to standard medical care alone (Mehling et al., 2007).

**Lymphedema:** Swelling from lack of functional lymph vessels & lymph nodes. The most common cause of lymphedema is removal of lymphatic structures during cancer-related surgeries. The second most common cause is damage to lymphatic structures during cancer-related radiation treatments.

**Massage therapy.** If you are not trained in lymphedema management, avoid areas affected by lymphedema. Be sure to screen your client for cellulitis.

**Cellulitis:** Localized bacterial infection of the skin & underlying tissues & is characterized by localized swelling, redness, warmth, pain, & tenderness.
Massage therapy. Be sure to screen your client for cellulitis if he or she has lymphedema. If you notice signs & symptoms of cellulitis, postpone the massage & urge your client to seek immediate medical attention. If left untreated, cellulitis may spread rapidly & become life threatening.

Radiation Therapy: Use of high-energy radiation to kill or reduce the size of cancer cells & tumors. Radiation may be delivered externally by a machine or internally by device that is surgically-implanted near the treatment area (brachytherapy).

Massage therapy. Back massage using gentle, even pressure promoted relaxation, reduced tension, & decreased fatigue in breast cancer patients undergoing radiation therapy (Sims, 1986). Campeau et al. (2007) found an immediate decrease in anxiety among cancer patients who received massage therapy after radiation treatments, but no major impact on anxiety scores were reported beyond this timeframe. Massage reduced anxiety & improved sleep quality & perceived quality of life associated with radiation treatments in women with breast cancer (Sturgeon, Wetta-Hall, Hart, Good, & Dakhil, 2009). Massage therapy & polarity therapy reduced cancer-related fatigue & improved the quality of life in breast cancer patients undergoing radiation therapy (Mustian et al., 2011).

Radiation Dermatitis: Ninety-five percent of individuals who receive external radiation therapy develop radiation dermatitis or skin inflammation caused by radiation. Signs & symptoms include dry, red, itchy skin that may be swollen & blistered & is often painful. The rash looks like a severe sunburn. This condition can begin within hours or may occur several weeks after radiation exposure. Radiation recall dermatitis, sometimes called radiation recall, is a skin reaction that that occurs in approximately 10% of patients who receive chemotherapy during or soon after radiation treatment.

Massage therapy. Assess the skin to determine if it is ready for massage. Assessment should include skin condition, temperature, & blanching. If the skin is swollen, blistered, warm/hot to the touch, &/or does not blanch, treat as a local contraindication. To perform the skin blanching test, press on the affected area with your finger using light pressure for a few seconds. This action reduces localized blood volume, causing the skin to blanch or turn white. Remove the pressure; the area should return to the color it was before pressure was applied within a few seconds. This response indicates good blood flow. If the skin does not blanch & appears red, blue, or purplish, blood flow is compromised & should not be massaged. Conducting the skin blanching test on dark skin has limited value, because it may mask the amount of localized blood flow. The amount of time between the end of radiation treatment & when skin affected by radiation dermatitis is ready for massage may be up to 4 months or longer. Once assessments indicate that the area is ready for massage, be sure the client is not positioned on skin affected by radiation dermatitis. Also, be sure that massage linens do not rub affected areas while massaging non-affected areas, because this friction could irritate skin. Be sure to use only light pressure over affected areas. Avoid aggressive techniques & deep pressure because of the skin’s reduced capacity for healing & increased risk for lymphedema. Avoid alcohol or alcohol-based products, because they can cause skin dryness & promote irritation.

Brachytherapy: Procedure that places slowly-releasing radioactive materials in the body.

Massage therapy. Inpatient high-dose temporary brachytherapy is an absolute contraindication for massage during treatment. Otherwise, follow the radiation oncologist’s instructions regarding contact precautions, especially for therapists who are pregnant. Be sure to ask the client where & when the internal radiation device was implanted & if there are any contact precautions in place. Most clients are already following these precautions, & clients are unlikely to seek out massage unless they are cleared for contact. Clients are considered “hot” if the implants are still in & if they are still radioactive. Avoid the area of active implants, & modify the massage according to treatment side effects. Radiation from implants is usually exhausted after 12 months.

Chemotherapy: Use of drugs to destroy cancer cells. These chemicals can be administered intravenously, by injection, topically, or orally in pill or liquid form.
Massage therapy. Use gloves if there is contact precaution. Slow-stroke back massage reduced pain, fatigue, & improved sleep in adults with acute leukemia while undergoing chemotherapy (Miladinia, Baraz, Shariati, & Malehi, 2016). Khiewkhern, Promthet, Sukpraserth, Eunphpinitpong, & Bradshaw (2013) found that combining light pressure Thai massage with aromatherapy ginger in coconut oil increased lymphocyte count by 11%, as well as reduced fatigue, pain, & stress in persons diagnosed with colorectal cancer who received chemotherapy. Massage reduced anxiety & improved sleep quality & perceived quality of life associated with chemotherapy, as well as radiation in women with breast cancer (Sturgeon et al., 2009).

Implanted Vascular Access Devices: Implanted vascular access devices (IVACs) such as a Port-A-Cath, or port, is a small device inserted beneath the skin in the upper chest wall, abdomen, or arm used to administer chemotherapy intravenously.

Massage therapy. Avoid the area around the port during massage; a 4-inch radius is advised. If the port is recently inserted, avoid joint mobilization to the shoulder near the port until the area has completely healed.

Post-chemotherapy Cognitive Impairment: Post-chemotherapy cognitive impairment (PCCI), or chemo brain, is loss of cognition, memory, & other cognitive-related abilities associated with chemotherapy. Some researchers have suggested that PCCI is more related to the cancer experience rather than to the chemotherapeutic drugs themselves.

Massage therapy. Support the client by reminding him or her of the appointment date, day, & time the day before & the day of the massage. Provide a written appointment card or design an email, phone, or text message reminder system.

Malaise & Fatigue: Malaise is a general feeling of discomfort, uneasiness, & ill-health with or without fatigue. Fatigue is the feeling of extreme tiredness & is closely associated with malaise.

Massage therapy. Discuss the timing of your sessions with the client. Be willing to adjust the time & date of the massage, depending on how the client feels the day of the massage appointment. Clients affected by malaise & fatigue may require varying degrees of modifications, including fewer changes in body positions & massage techniques of lighter pressure & slower speed. Massage was found to reduce cancer-related fatigue (Cassileth & Vickers, 2004; Karagozoglu & Kahve, 2013). Slow-stroke back massage reduced fatigue in adults with acute leukemia who were undergoing chemotherapy (Miladinia et al., 2016). Breast cancer patients who received massage experienced a reduction in cancer-related fatigue (Fernández-Lao et al., 2012; Listing et al., 2009) as did breast cancer patients undergoing radiation therapy who received both massage & polarity therapy (Mustian et al., 2011). Foot reflexology decreased fatigue in breast cancer patients undergoing chemotherapy (Yang, 2005).

Chemotherapy-induced Nausea & Vomiting: Chemotherapy-induced nausea & vomiting (CINV) is a common side effect.

Massage therapy. Consider having a disposable vomit bag (such as a Carebag) in your treatment room in case it is needed. Massage was found to reduce CINV among children (Mazlum, Chaharsoughi, Banihashem, & Vashani, 2013), women with breast cancer (Billhult, Bergborn, & Stener-Victorin, 2007), & cancer patients in general (Cassileth & Vickers, 2004). Sheikh, Ebadi, Talaeezadeh, & Rahmani (2015) found that the most effective method to reduce CINV was a combination of massage therapy, ginger, & the prescription medication dexamethasone. Foot massage decreased CINV (Grealish, Lomasney, & Whiteman, 2000; Yang, 2005). After reviewing available literature, Wilkinson, Barnes, & Storey (2008) found that research supports the use of massage to decrease nausea. Use a semireclining, upright, or semi-Fowler position (30- to 45-degree incline) while the client is supine to reduce the severity of CINV (Fathi, Nikbakht Nasrabadi, & Valiee, 2014). Additionally, avoid techniques that cause the client to rock or shake, because excessive body motion may worsen nausea.

Chemotherapy-induced Peripheral Neuropathy: Chemotherapy-induced peripheral neuropathy (CIPN) is damage to peripheral nerves associated with chemotherapy. It usually impacts nerves in the hands & feet & can include both sensory & motor symptoms. Individuals who are the greatest risk for developing CIPN are those who have diabetes or who have undergone previous chemotherapy treatments.
**Massage therapy.** Massage can be performed over areas of neuropathy. Massage has been shown to greatly decrease symptoms, increase skin temperature in fingers & toes, & improve the quality of life in person affected by CIPN (Cunningham et al., 2011). Be sure & request feedback from clients about pressure & comfort levels; modify techniques according to their comments. Clients with peripheral neuropathy of the lower extremities are prone to additional nerve injury at pressure points (e.g., behind the knee, front of the ankle). For this reason, use a soft rather than stiff bolster in these areas. Because of changes to positional sense & possible muscle weakness, be diligent about safety & provide a barrier-free space in both the office & treatment room areas. This includes not having supportive cushions (such as, bolsters on the massage table) while the client is transferring on & off the table.

**MOOD DISORDERS**

Mood disorders are emotional disturbances consisting of prolonged periods of excessive sadness or excessive elation, or both, that significantly impair the person's capacity to function. Excessive sadness is called depression & excessive elation is called mania. Types of mood disorders are depressive & bipolar. Excessive sadness is characteristic of depressive types of mood disorders, & varying combinations of excessive sadness & excessive elation are characteristic of bipolar types of mood disorders. According to the National Institute of Mental Health (2016), depression is commonly seen among individuals with chronic & debilitating diseases, including cancer, heart disease, diabetes mellitus, stroke, & Alzheimer disease.

**Major Depressive Disorder:** Major depressive disorder occurs when excessive sadness interferes with a person’s ability to work, sleep, study, eat, & enjoy once-pleasurable activities. Major depressive disorder is also called clinical depression & unipolar depression.

**Massage therapy.** Massage can be performed on clients with depression, because massage may give a client a sense of general well-being. The overall effect should be nurturing & relaxing. Research suggests that massage alone or in combination with aromatherapy, music therapy, yoga, or psychotherapy can reduce depression in a variety of population groups (Castro-Sánchez et al., 2011; Choi & Lee, 2015; Field et al., 2009; Field, Diego, Hernandez-Reif, Schanberg, & Kuhn, 2004; Field, Diego, Hernandez-Reif, Deeds, & Figueiredo, 2009; Field et al., 2012; Field, Grizzle, Scafidi, & Schanberg, 1996; Field, Hernandes-Reif, Diego, & Fraser, 2007; Field, Hernandez-Reif, Hart et al., 1997; Field, et al., 1992; Field, Quintino, Henteleff Wells-Keife, & Delvecchio-Feinberg, 1997; Field et al., 1998; Hernandez-Reif, Field, Field et al., 1998; Hernandez-Reif, Field, Krasnegor, & Theakston, 2001; Moraska & Chandler, 2009; Oliveira, Hachul, Goto, Tufik, & Bittencourt, 2012; Oliveira, Hachul, Tufik, & Bittencourt, 2011; Zhou et al., 2007).

Hernandez-Reif, Field, Krasnegor et al. (2000) found that although both massage & progressive muscle relaxation reduced blood pressure in hypertensive adults, only the massage group reported less depression & had decreased levels of cortisol. Facial massage for 45 minutes was found to reduce depression in healthy females (Hatayama, Kitamura, Tamura, Nagano, & Ohnuki, 2008). Aromatherapy hand massage using a blend of bergamot, lavender, & frankincense reduced depression in hospice patients (Chang, 2008). Jones & Field (1999) found that combining massage & music therapy attenuated frontal electroencephalogram (EEG) asymmetry in depressed adolescents; this effect is associated with improved depressive symptoms.

Hou, Chiang, Hsu, Chiu, & Yen (2010) & Moyer, Rounds, & Hannum (2004) performed meta-analyses & found massage therapy to significantly reduce depressive symptoms. Moyer et al. (2004) indicated that, with a course of treatment, massage may provide benefits similar in magnitude to those of psychotherapy. The AMTA (2011) issued a position statement indicating that massage therapy can be effective in reducing the symptoms of depression.

Note that some findings in the aforementioned studies were performed by non-professionals, such as significant others & caregivers. Also note that positive effects of massage can extend to others, such as the person giving the massage & to the unborn as in the case of parental depression.
CHRONIC OBSTRUCTIVE PULMONARY DISEASE

COPD is a group of respiratory diseases characterized by persistent or recurrent air flow obstruction that worsens with exertion. The most common forms of COPD are chronic bronchitis & emphysema. Neuromuscular massage has been shown to increase gas volume, peak flow, & forced vital capacity among individuals with COPD (Beeken, Parks, Cory, & Montopoli, 1998). The American Lung Association (2016) supports the use of complementary therapies such as massage to manage pain, reduce anxiety, & improve the quality of life for individuals diagnosed with COPD.

Chronic Bronchitis: Prolonged inflammation of the bronchial mucosa with resultant swelling & mucus hypersecretion.

Emphysema: Permanent enlargement of lower airways accompanied by destruction of alveolar walls, affecting their elasticity. Obstruction results from changes in lung tissue rather than mucus production & inflammation, as seen in chronic bronchitis.

Massage therapy. Ask about medications (such as an inhaler) that are used to improve breathing. If client has one, put it in a location that is easy to access in case it is needed during the session. Clients with respiratory diseases may benefit from certain body positions to help him or her breathe more easily during the massage (Cleveland Clinic, 2014). While supine, elevate the client’s upper body & head while resting the knees on a bolster. While side-lying, elevate the client’s head & place a pillow between the knees. While seated, be sure that the client’s feet are flat on the floor with elbows resting on the knees. Avoid the prone position or limit time spent in this position.
References


Susan G. Salvo
facebook.com/susansalvo
MassagePassport@gmail.com
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