Massage and Pharmacology Home Study Course

4 CE Hours
Text, Examination, and Online Course Guide

Presented by the:

Center for Massage Therapy Continuing Education
PO Box 117 • Elk Point, SD 57025
866-784-5940 • www.massagetherapyceu.com

Table of Contents

Center for Massage Therapy Continuing Education

PO Box 117
Elk Point, SD 57025
www.massagetherapyceu.com
Ph: 866-784-5940
info@massagetherapyceu.com
Written and Published by the Center for Massage Therapy Continuing Education

It is the responsibility of the practitioner to determine the appropriateness of the principles presented in terms within the scope of practice. This information is in no way meant to diagnose or treat medical conditions.

Instructions for the Massage and Pharmacology Home Study Course

Thank you for investing in the Massage and Pharmacology home study course, a 4 CE hour course designed to further your knowledge in massage therapy and how clients on medication and drug therapy can be affected by it. The following will give instructions on what you will need to do to complete this course. This is a 4 CE hour course, so that means it should take you approximately 4 hours to read through the text and complete the exam and course evaluation form.

The following are steps to follow in completing this course:

1. **Read the instructions and review the text and exam.**

2. **Access the online examination in your account at www.massagetherapyceu.com.**

3. **Complete your examination and print your certificate. The exam is open book and there is no time limit for completion.**

You must pass the exam with a 70% or better to pass this home study course. You are allowed to access and take the exam up to 3 times if needed. There is no time limit when taking the exam, and you can save your answers and return at a later date in needed. Feel free to review the text while taking the exam. There are no trick questions on the exam. All of the answers are clearly found in the text. The exam is also included at the end of the text for review before taking the exam.

It is advised to answer the exam questions in the study guide before testing online. That way, when you are testing you do not have go back and forth through the online exam.

Good luck as you complete this course. If you have any questions please feel free to contact us at 866-784-5940, 712-490-8245 or info@massagetherapyceu.com. Most state boards require that you keep your "proof of completion" certificates for at least four years in case of audit. Thank you for taking our Massage and Pharmacology home study course.

Massage and Pharmacology Text

Introduction

The following course covers a wide variety of drug categories, including drugs that affect the nervous system, respiratory system, gastrointestinal system, endocrine system, cardiovascular system, and the blood. In addition, this course will discuss drugs for pain control, infections, inflammation and allergies, fluid and electrolytes balance, psychiatric conditions, and cancer. Also reviewed are over-the-counter supplements and herbs, how all medications can affect the body, and how massage therapy techniques are affected for each client.

Discussed in this course, for many types of medications and drug therapies, is information that may help massage therapists consider the drugs each client is taking and determine cautions, contraindications, effects of massage, and the best massage strokes to use with each client. This course is only an assessment tool to help you as a massage therapist improve your massage and treatment goals for each client. It is in no way meant to diagnose or replace the treatment given by the client's primary care physician.

What is Pharmacology?

The definition of pharmacology is the science of drugs, including their composition, uses, and effects. At first glance, pharmacology and massage may seem to have nothing in common. Pharmacology is considered a traditional medicine and massage therapy is a natural modality, usually grouped with alternative and complimentary medicine, which does not include prescribing or using medications. In reality, many people who receive massages also are on some kind of drug therapy, and/or use over-the-counter medications on a regular basis. It is important as a massage therapist to know the physiological and chemical changes in the body that medications, in conjunction with massage, can produce.

What is Massage?

The definition of massage is the treatment and practice of soft tissue manipulation with physical, functional, and in some cases, psychological purposes and goals. Massage therapy utilizes basic tools/hands on techniques to achieve its effects such as effleurage, petrissage, vibration, friction, tapotement, traction, and stretching. Variations in how these are applied such as speed, depth, direction, and intention can and will change the physiological effects of massage.

General effects associated with massage are:

- Relaxation
- Muscle warming
- Increased blood circulation to massaged areas
- Decreased cardiac and respiratory rates
- Endocrine substances being released into the bloodstream

The variations in applying massage strokes can modify or increase these effects. Knowledge of how individual strokes create their effects is essential to individualizing a massage session for all of your clients, whether on drug therapy or not.

Effects of Massage Therapy

The effects of massage come from a combination of mechanical factors acting locally and systemically with nervous system reflex reactions. The mechanical methods of manipulation directly affect local soft tissue and fluid movement. As soon as massage begins, the sensory nerves are stimulated and send messages to the central nervous system (CNS). All body systems then follow the new rhythms produced by massage. There is an initial stimulation of the sympathetic nervous system in all cases of massage; and depending upon the application of the massage techniques, the body will stay in sympathetic activation or fall into the slower rhythm of the parasympathetic nervous system. Both will relax a client, the latter into a deep state of rest and the former to a more alert state.

Massage Effects on Body Systems

• Nervous System

The nervous system consists of the central nervous system, known as the CNS (brain and spinal cord), and the peripheral nervous system, known as the PNS (cranial, spinal, and the peripheral nerves). The PNS is then broken down into sub sections which consist of the autonomic nervous system, cranial nervous system, and the spinal nerves. The autonomic nervous system is then broken down into the sympathetic and parasympathetic nervous system.

The sympathetic and parasympathetic systems are the portion of the nervous system which is primarily affected by massage. For example, during a relaxation massage the sympathetic nervous system is calmed while the parasympathetic nervous system is stimulated since the two are opposite in relation to one another.

The nervous system can be stimulated or soothed based on the strokes that are applied to the body. Stimulation applied to the peripheral nerve receptors can have a reflex reaction affecting the neurotransmitters in the brain, the pain perception, or joints and muscles that are being massaged. As soon as massage begins, the sensory nerves are stimulated and send messages to the CNS. The method and speed of the massage application is read by the CNS, which in turn then sends hormones known as neurotransmitters to the autonomic division of the PNS.

The nervous system also works hand in hand with the endocrine System which regulates all the functions of the entire body by releasing hormones, or chemicals that produce the desired physical response in our bodies in order to achieve homeostasis. In the neuro-endocrine system, the effects of massage can change the neurotransmitters and hormone levels. There is an initial stimulation of the sympathetic nervous system in all cases of massage. Then, depending on the application of the massage techniques, the body will stay in sympathetic activation or fall into the slower rhythm of the parasympathetic nervous system.

Massage affects the neurotransmitters of the nervous system in the following ways:

- Massage increases the available levels of dopamine and explains the pleasure and satisfaction experienced during and after a massage
- Serotonin regulates mood in terms of appropriate emotions and has a calming effect, reducing irritability, and a number of different cravings. A low serotonin level has been implicated in depression, eating, and obsessive compulsive disorders. Massage seems to increase the level of available serotonin, producing an overall sense of calm.

- Endorphins are produced by the body to reduce pain and give an overall sense of wellbeing. Again massage increases the available levels of these natural chemicals and can promote healing, reduce swelling, and speed recovery.

Massage strokes that stimulate the nervous system include:

- Friction
- Percussion
- Vibration

Massage strokes that sedate the nervous system include:

- Effleurage
- Light petrissage
- Holding pressure, such as compression

• Cardiovascular and Respiratory Systems

In the cardiovascular and respiratory systems, massage can bring increased blood flow and fluid circulation to the area being massaged. Some strokes move fluid and blood enough to directly increase systemic blood flow, leading to slight increases in heart rate and respiratory rates. However, most of the reactions of the cardiovascular and respiratory systems are mediated through the nervous system. The sympathetic nervous system will increase heart rate, blood pressure, and respiratory rates. The parasympathetic nervous system will decrease heart rate, blood pressure, and respiratory rates.

In the cardiovascular system, massage can:

- Help improve blood flow to the tissues, muscles, and vital organs - Strong and consistent flow of oxygen-rich blood to brain tissue is essential to help preserve cognitive function and protect against strokes. Sustained blood flow can also help keep muscles from cramping while also preserving organ function and maintaining healthy skin.
- Help improve blood pressure - Since massage can improve relaxation, the reduction in stress and release of stress chemicals in the body can help lower blood pressure, according to MayoClinic.com, which notes that massage and other relaxation techniques help relieve "the wear and tear on your mind and body."
- Improve the health of fascia - Massage can help improve the health of your fascia, a thin layer of tissue that surrounds and penetrates muscles, bones, organs, and other tissue throughout the body. All major blood vessels are connected to these sheathes of fascia, so if the fascia is properly aligned and healthy, your circulatory and nervous systems will benefit.
- Stimulate circulation in the tissues involved and promote substance exchange between the cells
- Dilate blood vessels which can decrease blood pressure

In the respiratory system, massage can:

- Normalize breathing through a balancing effect on the autonomic nervous system
- Encourage deeper breathing and a more complete breath through the relaxing effect
- Loosen the intercostal muscles (the muscles between the ribs) and free the rib cage to permit greater chest expansion, thereby allowing deeper breathing and more oxygen flow to all cells
- Release congestion and aid in lowering blood pressure
- Generate heat to raise body temperature and respiratory rate

- Stimulate proprioceptors in the joints and increase respiration through range of motion in an inactive person

• Integumentary System (Skin)

Massage has direct effects on the skin, mainly through mechanically removing dead skin cells and increasing blood and warmth to the surface. Connective tissue is also directly affected by the mechanics of massage. Warmth and fluids are brought to the local area by standard massage strokes and specific connective tissue and myofascial techniques, which loosen and soften tissues and muscles as well as ease movements.

Effects of massage on the integumentary system are:

- Massage aids in vitality and elasticity of skin
- Massage aids in elimination of dead cells
- Massage sends messages to the brain through sensory receptors in skin to aid in relaxation of entire body

• Lymphatic System

The effects on the lymphatic system are derived from the mechanical movement of lymph. This movement of fluid enhances the function of the immune system. In addition, the balance of the sympathetic and parasympathetic nervous systems will increase the restorative effects of the immune system and its defenses against infection.

In the lymphatic system, massage can:

- Assist the flow of lymph throughout the body, thereby assisting the immune system to prevent disease
- Aid in reducing edema (swelling)
- In chronic inflammatory conditions in which fibrosis (scar tissue) is sure to advance if tissue fluid and lymph remain stagnant, massage is important in moving lymph and fluid

• Digestive System

The digestive system is affected only indirectly, again through the nervous system. The sympathetic nervous system slows the activity of the digestive system and the parasympathetic nervous system increases its activity.

In the digestive system, massage can:

- Indirectly normalize digestive functions through normalization of the Autonomic Nervous System
- Improve tone of the large and small intestines
- Stimulates peristalsis, which can aid in relief of constipation and/or diarrhea
- Have a stimulating effect on the digestive organs, which helps improve digestion
- Stimulate the small and large intestines, aiding in the absorption of fat and nutrients into the body

• Urinary System

Massage stimulates the urinary system by enabling the waste products in the body to be eliminated more effectively. Water retention and edema can be helped by regular massage as the function of the kidneys is increased.

The kidneys are indirectly affected by massage therapy techniques in the following ways:

- The increase in cellular metabolism can increase kidney function and output. As cellular metabolism increases, so does the amount of waste emptied in to the blood and lymph.
- The release of metabolic waste into the body fluids and the bloodstream may also increase kidney activity.
- The increase in systemic circulation that can occur with massage may cause the kidneys to have to filter more fluid and thus increase their output.

• Endocrine System

The effects on the endocrine system are closely linked to the nervous system. Both neurotransmitters and hormone levels can be changed by massage strokes. The combination of these changes and the chemicals active in the body at any given time allows massage to bring about relaxation and balance. Hormones such as epinephrine/norepinephrine activate arousal, alertness, and the fight-or-flight function of the sympathetic nervous system. This is increased or decreased by massage depending on what the body needs to reach balance and homeostasis at the time of the massage.

Massage therapy can have the following effects on the endocrine system:

- Increases general circulation in the endocrine system and thus helps in transport of hormones
- Indirectly aids immune system, as some hormones produce lymphocytes to aid in immunization
- Normalizes endocrine activity through a balancing effect on the autonomic nervous system

• Skeletal System

Massage and joint movement increase blood supply to bones. This aids the flow of nutrition, giving growth and repair to bone. Massage can promote elimination of waste matter, and helps maintain better posture, giving good body balance.

In the skeletal system massage can:

- Increase blood circulation which nourishes skeletal cells
- Improve muscular balance and thus skeleton alignment
- Exercise joints through range of motion - joints are nourished by joint fluid, which is moved and circulated by massage
- Aid circulation in the area of a fracture without producing motion in bone fragments - massage also aids in healing of surrounding affected tissue
- Can aid functional efficiency in terms of structural support/posture - massage can be a first step in the process of postural awareness
- Can prevent adhesions from forming and can break down adhesions - these adhesions can form between ligaments and bones, can alter a joint and limit range of motion - adhesions can form reparative tissue, but not flexible, and massage can create a mobile scar

• Muscular System

Massage affects the muscular system by increasing the supply of blood and nutrients to muscles, restoring muscle tone and strength, partially compensating for lack of exercise or inactivity. It can prevent, eliminate, and/or heal muscle adhesions due to illness or injury. Massage therapy can also increase flexibility and strength in muscles and joints.

In the muscular system, massage can:

- Increase blood and nutrition without adding to the load of lactic acid (lactic acid forms in muscles as a result of muscular activity and too much can result in muscular fatigue and/or cramps)
- Decrease lactic acid, causing muscles fatigued by this to be restored sooner
- Lessen the amount of fibrosis or adhesions which develop in immobilized or injured muscles
- Create a mobile scar and helps restore muscles to their original condition after injury
- Cause relaxation of voluntary muscles
- Break up adhesions and scar tissue
- Relax muscle spasms (sudden involuntary muscle contractions) and relieve tension in the muscles
- Aid in structural alignment by relaxing over-contracted muscles, which can pull bones out of alignment

• Reproductive System

In women, massage affects the reproductive system by reducing depression and anxiety associated with pre-menstrual syndrome (PMS). It can also reduce excess fluid retention, and help prepare the body for the birthing process.

There is really no scientific evidence of how massage therapy may affect the male reproductive system. Massage therapy may indirectly affect the hormone balance in men, through affecting the endocrine system, which may have an indirect effect on the reproductive system.

Massage Strokes and Their Effects

Massage, like any other discipline, has a variety of tools. The incredible number of different modalities and types of massage applications can be traced back to a limited number of basic massage strokes.

These include (but are not limited to):

- Touch/compression
- Vibration/shaking
- Tapotement
- Friction
- Petrissage
- Effleurage
- Stretching/traction

The effects of these strokes are greatly changed by varying the depth, direction, speed, time, and intention with which they are applied to the body. All of the above strokes will have local effects on the skin, connective tissue, and cardiovascular system.

Massage techniques can have the following effects on the body:

- Local or Systemic
    - Local massage responses directly influence the site being massaged. Examples of effects local massage are hyperemia and warming at the site of massage.
    - Systemic effects of massage strokes are those which affect the body as a whole, such as increased circulation as a result of a full body massage.

- Mechanical or Reflex
    - Mechanical effects of massage strokes are responses resulting directly from applied manual pressure. Examples of mechanical effects are increased range of motion and breakdown of adhesions in muscle tissue.
    - Reflex effects of techniques on the body are responses mediated by the nervous system such as vasodilatation of the blood vessels and stimulation of peristalsis in the colon.

Depending on the desired result, different applications of specific strokes are given by the massage therapist.

Strokes that work best for local, mechanical results are:

- Petrissage
- Friction
- Effleurage

Strokes that have a strong systemic reflex action are:

- Effleurage
- Friction
- Rocking
- Tapotement

Strokes that have a strong systemic mechanical effect on one or more of the individual body systems are:

- Effleurage
- Tapotement

Again, the variations in applying these strokes can modify or increase these effects. Knowledge of how individual strokes create their effects is essential to individualizing a massage therapy session for your clients. Please note that many of the same massage strokes/modalities can have local and systemic as well as mechanical and reflex effects on the body depending on how they are applied to the body.

Summary of Massage Strokes and Their Effects

- Local mechanical strokes/modalities are those that have a direct local effect on the immediate area and tissues being massaged. These include:
    - Effleurage

    - Petrissage
    - Friction
    - Myofascial techniques
    - Swedish massage

These techniques mechanically bring blood and lymph to the area being massaged, soften tissue, and increase cellular exchange of wastes and nutrients in the area being worked.

- Local reflex massage strokes/modalities are techniques that have a local effect on tissues through the use of neurological feedback from the body. These include:
    - Touch/compression
    - Vibration/shaking
    - Friction
    - Stretching/traction
    - Deep tissue
    - Sports massage
    - Tai massage

- Systemic mechanical massage strokes stimulate the whole body by the use of mechanical massage techniques. These include:
    - Effleurage
    - Tapotement

These techniques mechanically affect the whole body system. Effleurage increases blood flow, blood pressure, and heart rate in the cardiovascular system. Tapotement increases general stimulation of the nervous system.

- Systemic reflex techniques/modalities affect the body as a whole and body responses are mediated by the nervous system. They include:
    - Effleurage
    - Rocking
    - Friction
    - Tapotement
    - Swedish massage
    - Sports massage

These stimulate chemical/hormonal changes in the whole body mediated through the CNS, neurotransmitters, and hormones that affect relaxation and stimulation.

General Effects of Drug Therapy on Massage

Each drug category has a different effect on massage, based on how the medication acts on the body. In some cases the drug/medication will have little or no effect on how massage works. In others, the drug may have a significant effect. The majority of medications will fall in between. The effect will be small, but will be enough that minor changes in how massage techniques are applied will allow the therapist to better meet the goals of the session.

Most medications are taken orally, and their absorption will not be greatly affected by massage. In some cases, massage can change the rate of absorption in medications delivered subcutaneously, by intramuscular injection, or applied topically. A massage therapist should always review the client's medications, both prescription and over-the-counter before performing any type of massage. Many medications used today have actions that work throughout the nervous system, even when the drug therapy is for another body system, and the medication will change how a client's body reacts to massage. Other drugs may work on a cellular level, change tissue, increase toxins, or work on a specific body system.

In general, massage itself is used to stimulate the parasympathetic nervous system and bring about relaxation. If a client is taking a medication whose main action is to stimulate this same system, then the effects of the massage will be greatly increased. Medications that stimulate the parasympathetic nervous system, such as cholinergic agonists and anti-cholinesterase drugs, have many side effects. Main side effects include low blood pressure and orthostatic hypotension. These conditions may lead to dizziness and fainting. It is your responsibility as a massage therapist to be aware of these side effects. If you are concerned with the type of medication a client is taking, stay with the client while he or she sits up to ensure that they are not experiencing dizziness or other complications.

- **Skeletal Muscle Relaxants**

Skeletal muscle relaxants relieve musculoskeletal pain and/or spasm and severe musculoskeletal spasticity (stiff, awkward movements). They reduce skeletal muscle tension. The main action of these medications is depression of the CNS. Massage will not affect absorption because these drugs are taken orally.

Examples of muscle relaxants include:

- Flexeril
- Skelaxin
- Zanaflez
- Valium

Potential side effects of muscle relaxants include:

- Postural hypotension
- Dizziness
- Fatigue
- Weakness
- Drowsiness
- Constipation

Massage restrictions for clients under the influence of muscle relaxants include:

- Avoid heat
- Avoid deep pressure
- Assist with positioning is necessary
- Avoid stretching techniques

The types of strokes whose efficacy may be affected are the reflex strokes, both local and systemic, such as:

- Effleurage
- Friction
- Tapotement

The most effective strokes to use with clients on these types of drugs are:

- Petrissage
- Effleurage
- Gliding strokes

Systemic reflex strokes such as effleurage, may have increased and more rapid effects. Stay with the client to help prevent problems when sitting up and always encourage the client to drink plenty of fluids.

• Pain Medications

Drugs used to control pain range from mild, over-the-counter medicines such as Tylenol, to potent general anesthetics, such as narcotic agonists like morphine sulfate. The action of pain medications is that of decreasing prostaglandin syntheses. This leads to decreased sensitivity to pain, reduced inflammation, and reduced fever.

When looking at individual massage strokes, decreased sensitivity to pain always means that caution must be used with the depth/pressure exerted. All massage strokes especially effleurage, petrissage, and friction dilate blood vessels. Because this is also an action of these types of drugs, care needs to be taken that the effect is not compounded, leading to a drop in blood pressure.

Examples of pain relievers include:

- Aleve
- Ibuprofen
- Tylenol
- Aspirin
- Tramadol
- Morphine
- Codeine
- Biofreeze

Potential side effects of pain relievers include:

- Headaches
- Dizziness
- Stomach pain
- Fatigue
- Nausea
- Constipation
- Weakness

Massage restrictions for clients under the influence of pain relievers include:

- Avoid heat

- Avoid deep pressure
- Assist with positioning is necessary
- Avoid stretching techniques

One side effect of pain medications is dizziness, and care should be taken when the client is sitting up after a massage. If your client experiences any other, more serious adverse effects, immediately refer them to their primary care physician.

Narcotic pain relievers will have a more powerful effect on the nervous system and therefore side effects are more common. Massage effects of relaxation are greatly increased for clients taking narcotic pain relievers.

Topical anesthetics drugs such as biofreeze, mineral ice, icy hot, and others temporarily decrease sensation to an area. They are applied directly to the skin and relieve minor pain. Care needs to be taken to the site of massage application.

• Drugs that Treat Cardiovascular Disease

Cardiovascular medications are used to improve cardiovascular function and, in most cases, the action affects the heart muscle. There are no specific massage strokes which directly have an impact on the heart. However, all massage strokes affect the heart indirectly, by affecting the vascular system. Choice of strokes used is based on the individual condition and needs. As in all cases, if the client has a more serious cardiac condition a physician's approval for massage should be obtained.

Examples of cardiovascular drugs include:

- Beta-blockers such as Lopressor
- Ace inhibitors such as Accupril and Altace
- Blood thinners such as Coumadin and Heparin
- Vasodilators such as Nitroglycerin
- Anticlotting medications such as Plavix

Potential side effects of cardiovascular drugs include:

- Dizziness
- Fatigue
- Hypotension
- Joint pain
- Bruising
- Abnormal heart rate
- Tiredness
- Dysrhythmia

Massage restrictions for clients under the influence of cardiovascular drugs include:

- Avoid heat
- Avoid deep pressure
- Assist with positioning is necessary
- Avoid stretching techniques

- Avoid laying the client prone

The types of strokes whose efficacy may be affected are the reflex strokes, both local and systemic, such as:

- Effleurage
- Friction
- Tapotement

• Diuretic Medications

Diuretics are used to promote the excretion of water and electrolytes by the kidneys. They play a major role in the treatment of hypertension and other cardiovascular conditions. The action of these drugs is to increase secretion of sodium and water. Mechanical massage strokes, such as effleurage, have an increased action by speeding blood to the kidneys and increasing excretion further. It is appropriate with clients on diuretics to limit the use of effleurage to try and prevent increased kidney excretion.

Orthostatic hypotension (which is a form of hypotension in which a person's blood pressure suddenly falls when the person stands up) can be a problem with massaging clients on diuretics. In addition, the loss of sodium, potassium, and other electrolytes may lead to cramping of muscles. Massage can help alleviate cramping, but referral to a physician is required to evaluate if the cramping is caused by an electrolyte imbalance. Because diuretics may also be used in edematous conditions, such as heart failure and liver disease, consultation with a physician regarding the client’s condition may be indicated. Finally, taking care when the client is changing positions or standing is an appropriate procedure while performing massage on diuretic clients.

Examples of diuretics include:

- Lasix
- Amiloride
- Bumetanide
- chlorothiazide

Potential side effects of diuretics include:

- Frequent urination
- Dehydration
- Electrolyte imbalance
- Dizziness
- Fatigue
- Hypotension
- Muscle weakness, cramping, or spasms

Massage restrictions for clients under the influence of diuretics include:

- Avoid heat
- Avoid deep pressure
- Assist with positioning is necessary
- Limit or avoid the client in the prone position

• Hematologic Medications

Hematologic drugs such as iron, vitamin B12, and folic acid are essential for red blood cell production. The only concern for massage is increasing the absorption of iron with an intramuscular injection. In this case, massage is contraindicated on the injection site for up to three days.

A side effect of iron therapy that may cause concern for a massage therapy is constipation. The therapist should encourage fluid intake and perform abdominal work to encourage the movement of stool.

B12 is available in both oral and injectable forms, and the only implication for massage therapy is avoiding the injection site for approximately 1 hour after injection.

Folic acid is given orally and therefore does not affect the applications of massage therapy.

Examples of hematologic drugs are:

- Iron
- B12
- Folic Acid
- Alprolix
- Droxia

Possible side effects of hematologic drugs that may be a concern to massage therapists are:

- Fatigue
- Weakness
- Dizziness
- Muscle pain

Massage restrictions for clients taking hematologic drugs include:

- Avoid deep pressure
- Assist with positioning is necessary
- Assist client on and off of the massage table if needed

Shorter sessions may be indicated with client's experiencing side effects and care must be taken in getting the client off the table to ensure safety.

• Drugs that Treat Respiratory Disorders

Respiratory medications are used to improve respiratory function such as asthma, bronchio-spasms, and other respiratory problems. Respiratory drugs can also be used to treat more severe respiratory problems such as COPD.

Respiratory medications may decrease the response to massage strokes aimed at relaxation. To meet a goal of relaxation for the client, slow, rhythmic effleurage and rocking strokes may lead to a more effective massage. More stimulating strokes, such as tapotement or friction, may exacerbate the medication's side effects. Care should be taken to assist the client off the table, and again, if more serious problems occur, refer the client to their physician for permission before undergoing massage therapy.

Examples of respiratory medications include:

- Over the courter expectorants and cough suppressants
- Ambrodi
- Ambril
- Unidrinal
- Sedonal
- Broncofree

Common side effects of these drugs are:

- Dizziness
- Restlessness
- Anxiety

Massage strokes which may have adverse effects with respiratory drugs include:

- Tapotement – Unless the goal of the massage is to loosen chest congestion, then tapotement and percussion may be indicated
- Friction

Strokes indicated for clients' under the influence of respiratory drugs include:

- Slow rhythmic strokes
- Rocking
- Effleurage

• Drugs that Treat Gastrointestinal Disorders

Gastrointestinal (GI) medications are used to improve GI function and may include peptic ulcer drugs, digestive drugs, antidiarrheal and laxative drugs, antiemetic, and emetic drugs. These drugs act specifically in the digestive system to aid in digestion.

Most massage strokes do not have a direct effect on how these medications act on the body. However, as in all cases of massage, consult the client's physician for any severe problems.

Examples of medications used for gastrointestinal disorders include:

- Immodium
- Kaopectate
- Colace
- Dulcolax
- Protonix
- Pepcid
- Lialda
- Prednisone

The most common side effects of digestive medication therapy are:

- Cramping
- Nausea
- Diarrhea

The most effective strokes to use with clients on these types of drugs are:

- A relaxing massage may help to side effects
- Massage using systemic reflex strokes, such as effleurage and Swedish massage

• Anti-infective Medications (Antibiotics)

Anti-infective drugs such as antibiotics are used to treat specific infections. The number and variety of antibacterial drugs in use today is quite astonishing. Penicillins remain one of the most important and useful antibacterial medications. New and more potent forms are being discovered all the time.

Because all antibacterial drugs have basically the same implications for massage, the client's condition (not the medication) may require changes in massage protocol. The actions of the antibacterial drugs do not affect the way the body receives and responds to massage. However, the type, location, and severity of infection and/or the client's condition must be taken into account. For example, if a client is taking an anti-infective medication for a bacterial infection in their leg, you will need to assess the client's leg to see if massage is contraindicated on that area.

Examples of antibiotics include:

- Amoxicillin such as Augmentin
- Clindamycin
- Ampicillin
- Zithromax
- Amikin

Common side effects vary greatly depending on the type of antibiotic taken. Concerns to massage therapists when treating clients on antibiotics are:

- Fatigue
- Depression
- Nervousness
- Insomnia
- Kidney damage
- Nausea
- Vomiting
- Diarrhea

A good evaluation of the client's symptoms and condition is always indicated and may necessitate changes in the way a massage is given.

• Anti-inflammatory, Anti-allergy, and Immuno-suppressant Medications

Immune and inflammatory responses protect the body from invading foreign substances. These responses can be modified by certain medications such as anti-inflammatory drugs, anti-allergy drugs, and immuno-suppressants.

Drugs that block histamine decrease blood vessel dilation, decrease the smooth muscle response, and decrease nerve sensitivity in the skin. Massage strokes mechanically increase the dilation of blood vessels and flow of blood to the tissues; therefore, they could work against the medications actions,

and exacerbate the symptoms. In the case of dermatological symptoms such as hives or rash, massage is contraindicated on the affected areas.

Common examples of anti-inflammatory, anti-allergy, and immuno-suppressant medications include:

- Cortisone
- Prednisone
- Cyclosporine
- Mycophenolate
- Rapamycin
- Zyrtec
- Benadryl
- Ibuprofen
- Naproxen

If medication is being used to prevent reactions or to treat respiratory conditions, massage implications are more related to the side effects of the drugs rather than the actions of them. Most concerns to massage therapists are:

- Dizziness
- Lethargy
- Hypotension
- Constipation
- Nausea
- Vomiting
- Loss of appetite
- Decrease in muscle function
- Hyperglycemia

The massage practitioner needs to take care when having the client change positions. Monitoring blood pressure is important and elevated blood pressure should be reported to a physician. If severe reactions occur, no massage should be performed. Massage restrictions for clients under the influence of anti-inflammatory, anti-allergy, and immuno-suppressant medications vary with the type and dosage of the medication and may include:

- Avoid using heat
- Avoid deep pressure
- Assist with positioning is necessary
- Avoid stretching techniques
- Avoid laying the client prone

Indicated massage strokes for clients taking anti-inflammatory, anti-allergy, and/or immuno-suppressant medications include:

- Gentle techniques such as effleurage
- Slow rhythmic strokes
- Rocking
- Swedish massage
- Vibration

Some corticosteroids such as, cortisone, hydrocortisone, and prednisone, suppress immune responses and reduce inflammation, are not completely understood. They have multiple effects on metabolism, cellular activity, fluid balance, and tissue density. The client's condition must be evaluated to see if massage is contraindicated or if gentle supportive massage will be helpful. As in all cases, if symptoms are severe or if you are unsure, always refer to their primary care physician.

- **Drugs that Treat Psychiatric Disorders**

Psychiatric disorders include sleep anxiety, bipolar disorder, depression, and psychotic disorder. Medications that treat these disorders are usually sedative and hypnotic medications. Sedatives reduce activity or excitement with some degree of drowsiness. Sedatives most often used are given orally, and massage does not affect the absorption of the drug. If the medication is given by injection, the site of the injection should not be massaged for at least 2 hours.

Examples of drugs that treat psychiatric disorders include:

- Prozac
- Zoloft
- Paxil
- Effexor
- Elavil
- Wellbutrin
- Nardil
- Remeron

Side effects of sedatives that may be of concern to massage therapists are:

- Fatigue
- Dizziness
- Drowsiness
- Hypotension
- Headache
- Other more severe side effects should be reported to a physician and massage withheld until the client can be assessed.

Massage restrictions for clients under the influence of psychiatric medications include:

- Avoid heat
- Avoid deep pressure
- Assist with positioning is necessary
- Avoid stretching techniques

The types of strokes whose efficacy may be affected are the reflex strokes, both local and systemic, such as:

- Effleurage
- Friction
- Tapotement
- Rocking

The most effective strokes to use with clients on these types of drugs are strokes are slightly stimulating such as:

- Petrissage
- Rapid effleurage
- Friction
- Rocking
- Tapotement

Monoamine oxidase inhibitors (MAOIs), a powerful class of antidepressant medications, have many common side effects including, but not limited to insomnia, dry mouth, dizziness, lightheadedness, constipation, and weakness. If a client is experiencing restlessness and/or insomnia, systemic reflex strokes designed to relax and calm, with slow rhythmic effleurage, rocking or gentle touch are the best to use. If constipation is a side effect, always encourage fluids to help alleviate the problem. If side effects are severe, where bleeding or bruising under the skin occurs, massage may be contraindicated and great caution should be used.

Antidepressants have no effect on the reaction of the body to massage strokes, but side effects of these medications include orthostatic hypotension, dizziness, and drowsiness. Always assess the client and stay with them if they are having trouble getting off the massage table.

Anti-anxiety drugs are some of the most prescribed drugs in the United States. They are used to treat anxiety disorders. No change in application of massage is needed. The main side effects of these medications are dizziness and drowsiness. However, some people may also experience restlessness and insomnia. The correct massage approach to address dizziness and drowsiness is to stimulate with systemic reflex strokes. Restlessness and insomnia, however, are better approached by calming the nervous system with slow, relaxing strokes.

Antipsychotic medications are given to treat psychotic disorders. Along with anti-anxiety medications no change in massage application is needed. However, it is a good practice to monitor the client for side effects relating to these medications such as weakness and lightheadedness. If these occur, remain with the client to be sure they are all right. Antipsychotic drugs which are administered by injection present contraindications for massage at the site of the injection. Severe symptoms or changes noted in the client should be reported immediately to a physician and massage withheld.

• Drugs that Alter the Endocrine System

The endocrine system consists of the body's glands and hormones.

Examples of medications which alter the endocrine system include:

- Insulin
- anti-diabetic drugs
- Thyroid medications
- Glucotrol
- Avandia

Diabetes is characterized by disturbances in carbohydrate, protein, and fat metabolism. In diabetics, insulin and oral anti-diabetic medications are frequently required for blood glucose levels to be regulated. Insulin has many far-reaching effects on the body. It is important to understand the disease, the medications, the variety of peak times of action, and what all this information means for massage therapists. All insulin is given by injection, most by subcutaneous route, and the local area of injection is a contraindication site for massage for several hours to 1 day after injection depending on the type of insulin used.

Side effects of endocrine medications, depending on the drug, may include:

- Bruising
- Edema
- Fatigue
- Weakness
- Headache
- Dizziness

Massage restrictions may include:

- Avoid using deep pressure
- Assist the client with positioning if necessary
- Avoid laying the client prone for a long period

In some cases, massage can act like exercise and use up the available glucose and insulin faster, leading to an insulin reaction or hypoglycemic episode. Several factors play into this, including:

- How long since the client's last meal
- How frequently the client has had problems with this
- How the client is feeling that day
- How rapid or stimulating is the massage
- The client's emotions

Diabetes has many complications that require alterations in how massage is given. If a client with diabetes does not yet have any complications, massage can help to prevent some of them, reduce stress, and support the immune system. Massage can be used with just little common sense and is a very good health maintenance tool for a diabetic. However, physician approval must be obtained and open communication maintained regarding any changes in medication or condition.

The main side effects of insulin are those associated with insulin reactions or hypoglycemic reactions. Side effects of an insulin reaction or low blood sugar include:

- Dizziness
- Lethargy
- Confusion
- Blurred vision
- Slurred speech
- Weakness
- Fainting
- Shakiness

- Clammy cold skin
- Increased sweating

If any of these occur, massage needs to be stopped and the client given some form of sugar immediately. The scope of practice of a massage therapist does not include using a blood glucose monitor to check blood sugar levels or injecting insulin and the therapist should call for help. It is prudent to have a physician's release to perform massage on any client diagnosed with type 2 diabetes.

Thyroid medications are given orally, so there are no implications with regard to absorption. They act on the tissues of the body in the same way as our own thyroid hormone does. All the actions of thyroid hormone are not fully understood. A client who has been taking thyroid drugs for a while and whose condition is will regulated may receive massage without any concerns. However, a client who is just beginning drug therapy or has symptoms of thyroid disease is approached cautiously. Applications of massage may need to be altered depending on the symptoms of the disease more than the drug. A physician's input is appropriate in these cases.

• Medications for Fluid and Electrolyte Balance

Illness can easily disturb the homeostatic mechanism that helps maintain normal fluid and electrolyte balance. Medication and homeostasis help maintain normal fluid and electrolyte balance. Occurrences such as loss of appetite, medication administration, vomiting, surgery, and diagnostic tests can also alter this balance. Drugs can be used to correct these imbalances and help bring the body back to normal homeostasis.

Common medications used to treat fluid and electrolyte imbalances include:

- Potassium
- Calcium and phosphorus
- Magnesium
- Vitamin D3
- Sodium

Potassium in low levels can interfere with the reflex signals of the nervous system and make massage less effective on muscles. However, no change in the application of massage is necessary, and there are no side effects of concern to massage therapists. If any adverse reactions occur, massage is withheld and the client's physician should be notified.

Calcium is stored in bone, and released into the blood if necessary. When calcium intake is reduced it can cause weakening of the bone. As with potassium, calcium improves nerve and muscle reactions to systemic and local reflex massage strokes.

With the use of magnesium, as with other electrolytes, there are no changes needed in the applications of massage. It too improves the response of muscles to reflex massage strokes, both local and systemic.

The use of sodium enhances the reaction of nerves and muscles to massage strokes and does not affect the application of massage. If any adverse reactions occur with any of the electrolyte medications, and in all cases, always refer and consult with the client's physician.

Side effects are minimal for medications which help restore the body's normal homeostasis and there is usually no massage restrictions associated with these medications.

- **Drugs that Treat Cancer**

Cancer medications are used to treat patients with cancer, and the massage implications for clients taking these drugs are numerous, complex, and similar no matter which drugs are being taken.

Chemotherapy drugs are truly poisonous and toxic to cells, both cancerous and otherwise. Many research studies have been done and are still being done to determine the effect of massage on cancer patients. The results have mostly shown that massage can increase the effectiveness and decrease the side effects of chemotherapy. However, there are still concerns about massage spreading cancer through blood and lymph and moving toxins throughout the body. The therapist, the client, and the client's physician need to feel comfortable going ahead with massage treatment during chemotherapy.

The complexity of drug regimens for cancer patients requires a close working relationship with the client's physician. The interactions of the drugs, how quickly they are excreted from the body, how often they are given, which other medications are being used to prevent side effects, and the client's changes in condition all need to be discussed with the client's physician. Any surgical sites are contraindicated for massage until full healing of the incision has been achieved.

There are many, many cancer drugs available and they can be delivered in many ways such as topical, by pill, or intravenously. Some common examples include:

- Abitrexate
- Adriamycin
- Alcensa
- Campath
- Efucex
- Gardasil
- Siltuximab
- Zarxio

Massage that helps relax and bring the client into balance is the best focus. Once consulting with the patient's physician, suitable massage strokes to use with cancer patients are systemic reflex strokes that increase endorphins and enkephalins and balance neuro-endocrine secretions. These include:

- Rocking
- Shaking
- Gentle friction at the muscle tendon junctures
- Effleurage

Massage is usually best given before a chemotherapy treatment, although this may vary from client to client. The side effects and adverse effects of chemotherapy and radiation are numerous, all which should all be a concern to massage therapists. Massage can be an important adjunct in the client's treatment, but must be approached with care and with knowledge.

• Herbs, Supplements, and Alternative Medicine

It is very important to remember that the definition of a drug is any substance that will change the chemical processes of the body. Even though this text has primarily discussed and provided information about pharmaceuticals used in traditional Western medicine, it is not complete without some mention and explanation of the alternative treatments that are so popular and available today.

Herbs, supplements, and alternative medicines are sold over-the-counter and are not regulated by the food and drug administration (FDA). The definition of a dietary supplement according to law is "a product other than tobacco intended to supplement the diet or that bears or contains one or more of the following ingredients: a vitamin, a mineral, an herb, or other botanical, an amino acid, a dietary supplement used by man to supplement diet by increasing the total dietary intake, a concentrate, a metabolic, constituent, extract, or combination of any of the former ingredients."

Some herbals and alternatives have undergone extensive research and others have practically none. There is a great deal of controversy over this lack of regulation. Many of the herbal supplements have serious interactions with other drugs, both prescription and over-the-counter. All medications, in whatever form, need to be respected and taken carefully, and massage therapists need to be aware at all times, as well as be informed, of these drugs and their effects with massage.

No cautions or contraindications for massage exist for homeopathic medicines, and they may actually be complemented by massage because they enhance the body's own healing properties and balance. It would be important, however, for the massage therapist to encourage any client with a serious, complex illness to consult a homeopathic physician rather than self-medicate.

Vitamins are essential to the healthy functioning of the human body. They are found in nature and are ingested in food. The recommended daily allowance for vitamins created years ago by the FDA is based on the amounts of the vitamin needed to prevent deficiency diseases. There are no cautions or contraindications for massage in clients who are taking vitamin supplements and side effects are rare, but as in all cases, if any signs and symptoms occur, refer the client to a physician.

The same actions apply with herbs. Some herbs may cause side effects and should be reported to the client's treating physician or to an herbal practitioner. Below is a chart containing some common herbs and possible side effects.

HERB NAME	BOTANICAL NAME	USED FOR	POSSIBLE SIDE EFFECTS
Ginko	Ginko biloba	An antioxidant	Blood thinning effect
Chamomile	Matricaris recutita	Anxiety, sleep aid	Can cause an allergic reaction to certain ragweed
Ginger	Zingiber officinale	Digestive aid, motion sickness	Heartburn, diarrhea
Green Tea	Camellia sinensis	An antioxidant	Do not take in large amounts is pregnant
St. John's Wort	Hypericum perforatum	Treatment of mild to moderate depression	Can adversely interact with commonly prescribed drugs for older adults including blood thinners, antidepressants, heart disease, or heartburn
Fish Oil		To lower triglycerides, treat joint pain	Can act as a blood thinner
Red Clover	Triolium pretense	Used for menopausal symptoms, breast pain, high cholesterol, and symptoms of enlarged prostate	Can cause stomach upset, nausea, breast pain headache, weakness
Cayenne Pepper	Capsicum	To reduce cholesterol and triglyceride levels	Avoid inhaling; do not take if pregnant
Evening Primrose	Oenothera biennis	Used as an aid in treating heart disease, high cholesterol, circulation problems, acne, psoriasis, multiple sclerosis, cancer, asthma	Do not take without consulting an MD

Conclusion

Many massage therapists have been taught to obtain a list of medications or health history and have no idea what to do with it. Several questions need to be answered and several steps need to be taken to determine if the client's drug therapy regimen requires any change in the way massage therapy is applied.

The first question to be answered is "**What is the stated goal of the massage session for this client?**"

The second is "**What type of massage and what strokes would the therapist normally use to achieve these results of a client who was healthy and taking no medications?"**

Once these questions are answered, the process of formulating the proper treatment plan for your client can begin. Massage therapists must first determine if there are any immediate red flags that indicate massage could be harmful. If so, consult the client's physician before performing the massage. Each medication needs to be evaluated with regard to the strokes and goals. The massage therapist must also ask themselves "How does this drug achieve its effects in the body? What is the action of the medication? What are the side effects of the drug?" This process is not as complicated as it may seem and usually depends on knowledge and common sense.

Although massage therapists do not prescribe medications and should never presume to be experts in pharmacology, knowledge about drugs and their effects is critical. Knowledge on how the body receives and is affected by massage is also imperative. The massage therapy field is becoming more integrated with the medical system. As the clients who come to us are more and more plagued with chronic conditions, it is important to always be knowledgeable. The aim of massage therapy is to work with our clients holistically and individually, maintaining our focus on the client and not on the disease.

A sample medication assessment form as well as a client medication chart is located at the end of the course for use in your massage practice.

Resources

1. Lippincott Williams and Wilkins (Pharmacology for Massage Therapy) by Jean M. Wible RN, BSN, NCTMB, CHTP
2. Searching for the Missing Link: A Bodyworker's Practical Guide to Prescription Medications and Related Subjects by Mary C. Galipeau
3. www.massagetherappy.com/articles/index.php.article_id.1225
4. www.dictionary.com
5. www.holisticonline.com/massage/mas_def.htm
6. www.victorileigh.com/massage.htm
7. www.discover-massage-therapy.com/benefits-of-massage-physiological.html

Massage and Pharmacology Exam

1. What is the definition of pharmacology?
    A. The science of drugs, including their composition, uses, and effects
    B. The use of herbs only to treat illness
    C. The science of ant-inflammatory drugs
    D. All effects of all drugs

2. What is the definition of massage?
    A. The treatment and practice of soft tissue manipulation, with physical, functional, and in some cases psychological purposes and goals
    B. The treatment and function of muscles and how they react to a stimulus
    C. The function of muscles in the human body
    D. Manipulating the bones in the body

3. Drug therapy and massage therapy have nothing in common, so massage therapists do not need to have any concerns with patients on drug therapy.
    A. True
    B. False

4. General effects associated with massage therapy include:
    A. Relaxation
    B. Increased blood circulation the local area
    C. Cardio and respiratory rates decrease
    D. All of the above

5. Knowledge of how individual strokes create effects is essential to individualizing a massage session for a client receiving drug therapy.
    A. True
    B. False

6. In general, with massage, mental focus and concentration, as well as creative and logical thinking are:
    A. Decreased
    B. Not effected
    C. Improved with feelings of well-being
    D. Lowered

7. Which of the following are examples of basic massage strokes?
    A. Touch/compression and effleurage
    B. Tapotement and petrissage
    C. Friction
    D. All of the above

8. Skeletal muscle relaxants:
    A. Relieve musculoskeletal pain and/or spasm
    B. Increase pain or spasm to an area
    C. Cause stiff awkward movements
    D. Do nothing to help muscle pain or spasms

9. Which of the following explain the function of pain medications?
    A. Increase blood circulation
    B. Increase sensitivity to pain
    C. Decrease sensitivity to pain, reduce inflammation, and fever
    D. Increase inflammation

10. Which of the following is an example of a topical anesthetic drug used for pain?
    A. Ibuprofen
    B. Tylenol
    C. Biofreeze
    D. Aspirin

11. When a client complains of dizziness, feeling faint, the massage therapist should:
    A. Continue massage with no worries
    B. Give a more deep pressure massage
    C. Stay with the client while he or she sits up to ensure the client is ok
    D. Only work on certain areas of the body

12. In the case of cardiovascular conditions, diuretics are used to promote:
    A. Orthostatic hypotension
    B. Cramping of muscles
    C. Excretion of water and electrolytes
    D. Increased blood pressure

13. A side effect of iron therapy medication may be constipation, and massage therapists should:
    A. Encourage fluids and perform abdominal work to encourage movement of stool
    B. Massage only the injection site
    C. Encourage patient to increase sodium intake
    D. Don’t worry because there are no side effects of iron therapy

14. To meet a goal of relaxation for a client on respiratory medication, what kind of massage strokes should be used?
    A. Fast rhythmic strokes
    B. Slow, rhythmic effleurage and rocking
    C. Tapotement
    D. Friction

15. The most common side effects of respiratory drugs are:
    A. Fever
    B. Dizziness, restlessness, and anxiety
    C. Diarrhea
    D. Nausea and vomiting

16. Peptic ulcer drugs, digestive drugs, anti-diarrheal, and laxatives are considered what types of drugs?
    A. Respiratory drugs
    B. Cardiovascular drugs
    C. Gastrointestinal drugs
    D. Pain medications

17. The most common side effects of digestive drugs are:
    A. Anxiety and restlessness
    B. Cramping, nausea, and diarrhea
    C. Muscle pain
    D. Orthostatic hypotension

18. Antibiotics are used today for specific infections and they are considered what type of drugs?
    A. Respiratory drugs
    B. Gastrointestinal drugs
    C. Cardiovascular drugs
    D. Anti-infective drugs

19. The type, location, severity of infections, and client's condition must be taken into account before giving a massage.
    A. True
    B. False

20. In the case of dermatological symptoms, a massage therapist should:
    A. Massage only areas that are infected
    B. Do not perform massage at all
    C. Increase massage strokes to infected areas to exacerbate systems
    D. Avoid massaging areas that are infected

21. Medications that protect the body from invading substances are called:
    A. Respiratory and endocrine drugs
    B. Gastrointestinal drugs
    C. Cardiovascular drugs
    D. Anti-inflammatory, anti-allergy drugs, and immuno-suppressants

22. If a medication to treat a psychiatric disorder is given by injection, the site of the injection should:
    A. Not be massaged for 20 minutes after the injection
    B. Be massaged with tapotement strokes
    C. Be massaged with fast effleurage strokes
    D. Not be massaged for at least 2 hours after injection

23. Which of the following are side effects of sedative medications?
    A. Fatigue, dizziness, drowsiness, and hypotension
    B. Increased blood pressure
    C. Increased sensitivity to pain
    D. There are no side effects of concern

24. Which of the following would be the best action for a massage therapist treating a patient with diabetes who may be having a diabetic reaction?
    A. Administer insulin by injection
    B. Draw blood for glucose levels
    C. Stay with client, give some sort of sugar, and call for help
    D. Do nothing and continue with massage

25. Drugs and homeostasis help maintain:
    A. Normal fluid and electrolyte balance
    B. Increased blood glucose levels
    C. Reduce activity and excitement
    D. Normalization of anxiety disorders

26. What occurrences can alter normal fluid and electrolyte balance?
    A. Eating healthy balanced meals
    B. Loss of appetite, medication administration, vomiting, surgery, and diagnostic testing
    C. Drinking plenty of fluids, such as water
    D. No alterations can occur

27. It is usually best to give massage before a chemotherapy treatment.
    A. True
    B. False

28. Cancer medications are given to treat:
    A. Gastrointestinal disorders
    B. Respiratory disorders
    C. Cardiovascular disease
    D. Cancer

29. What is the definition of a drug?
    A. Any substance that will change the chemical processes of the body
    B. All over-the-counter drugs
    C. All drugs regulated by the Food and Drug Administration (FDA)
    D. All alternative medications

30. What is the definition of a dietary supplement?
    A. A product other than tobacco intended to supplement the diet
    B. Any drug prescribed by a doctor
    C. Drugs regulated by the Food and Drug Administration (FDA)
    D. Any over-the-counter medication

31. The recommended daily allowance for vitamins created years ago by the FDA is based on the amounts of the vitamin needed to:
    A. Increase energy
    B. Decrease mental focus
    C. Prevent deficiency diseases
    D. There is not a recommended daily allowance

32. There is no need to do an assessment or obtain a list of medications before performing massage on a client.
    A. True
    B. False

This completes the Massage and Pharmacology home study exam.

Medication Assessment Form for Massage Therapy

Client Name: _____ Date: _____

Name of Medications: _____

_____

Action of Drug in the Body: _____

Side Effects of Drug: _____

Does the medication raise any immediate red flags or require physician approval for massage therapy? ____ No ____ Yes

Is massage contraindicated for this type of drug therapy? ____ No ____ Yes

Physician approval received: Date: _____
Physician Name: _____

Are any massage stroke actions affected by the drug actions? ___ No ___ Yes

Massage strokes or types of massage contraindicated: _____

_____

Types of massage strokes affected

____ Local Mechanical:	____ increased effects	____ decreased effects
____ Local Reflex:	____ increased effects	____ decreased effects
____ Systemic Reflex:	____ increased effects	____ decreased effects
____Systemic Mechanical:	____ increased effects	____ decreased effects

Goal of sessions: _____

_____

Is the client experiencing any side effects from the drug therapy? ___ No ___ Yes
If yes, List: _____

Best strokes to use for this client: _____

_____

Strokes to reduce side effects: _____

Summary of massage protocol: _____

_____

Client Medication Chart

Name of Medication	Dosage	Drug Classification	Times Taken Daily	Time Last Taken	Reason For Taking	Known Side Effects	Massage Cautions And Restrictions