Lesson Plan: Circulatory and Lymphatic System Pathology

5 minutes: Breath of Arrival and Attendance

50 minutes: Circulatory and Lymphatic System Pathology
Classroom Rules

Punctuality- everybody's time is precious:

- Be ready to learn by 9:00, we'll have you out of here by 1:30
- Tardiness: arriving late, late return after breaks, leaving early

The following are not allowed:

- Bare feet
- Side talking
- Lying down
- Inappropriate clothing
- Food or drink except water
- Phones in classrooms, clinic or bathrooms

You will receive one verbal warning, then you'll have to leave the room.
Circulatory and Lymphatic System Pathology
Circulatory System Pathology
(Werner Page 228)

**Blood Disorders**
- Anemia
- Embolism
- Thrombus
- Hemophilia
- Leukemia
- Myeloma
- Sickle cell disease
- Thrombophlebitis
- Deep vein thrombosis

**Vascular Disorders**
- Aneurysm
- Atherosclerosis
- Hypertension
- Raynaud syndrome
- Varicose veins
Circulatory System Pathology  
(Werner Page 228)

Heart Conditions
- Heart attack
- Heart failure
- Cardiac arrest
<table>
<thead>
<tr>
<th>Lymph System Conditions</th>
<th>Immune System Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Edema</td>
<td>- Allergic reactions</td>
</tr>
<tr>
<td>- Lymphangitis</td>
<td>- Chronic fatigue syndrome</td>
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<tr>
<td>- Lymphadenitis</td>
<td>- Fever</td>
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<tr>
<td>- Lymphoma</td>
<td>- HIV</td>
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<tr>
<td>- Hodgkin lymphoma</td>
<td>- AIDS</td>
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<td>- Mononucleosis</td>
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</tbody>
</table>
Autoimmune Disorders

- Ankylosing spondylitis
- Crohn disease
- Inflammatory bowel syndrome
- Lupus
- Multiple sclerosis
- Psoriasis

- Rheumatoid arthritis
- Scleroderma
- Ulcerative colitis
Circulatory System Pathology

**Embolism**  Traveling clot or collection of debris.

**Thrombus**  Lodged clot.
Circulatory System Pathology

**Embolism**  Traveling clot or collection of debris.

**Thrombus**  Lodged clot.

**Risks**
- Tendency to form clots is a caution for mechanical techniques because it may result in an embolism.
- Blood thinners and anti-coagulants are a caution for mechanical techniques because it may cause bruising.

**Benefits**
- Non-mechanical techniques are indicated for massage to soothe and support clients with a risk of thrombus or embolism.
Circulatory System Pathology

**Thrombophlebitis**  Blood clots obstructing superficial leg veins.

**Deep vein thrombosis (AKA: DVT)**  Deep leg vein clots.
Circulatory System Pathology

Thrombophlebitis  Blood clots obstructing superficial leg veins.


Risks
- Diagnosed blood clot is a contraindication for rigorous massage.
- Deep, unilateral calf pain is a contraindication. See a doctor.
- Anti-coagulants may cause bruising after massage.
**Circulatory System Pathology**

**Hypertension (AKA: high blood pressure)** Persistently above 140/90.

<table>
<thead>
<tr>
<th>Category</th>
<th>Systolic BP (mm Hg)</th>
<th>Diastolic BP (mm Hg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optimal</td>
<td>&lt;120</td>
<td>&lt;80</td>
</tr>
<tr>
<td>Pre-hypertension</td>
<td>122–139</td>
<td>80–89</td>
</tr>
<tr>
<td><strong>Hypertension</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage 1 (mild)</td>
<td>140–159</td>
<td>90–99</td>
</tr>
<tr>
<td>Stage 2 (moderate)</td>
<td>160+</td>
<td>100+</td>
</tr>
</tbody>
</table>
Circulatory System Pathology

Hypertension (AKA: high blood pressure)  Persistently above 140/90.

Risks
- Diagnosed but unmanaged hypertension puts the person at risk for kidney disease, atherosclerosis, and risk of heart attack.
- Allow more time after a massage because medications can result in dizziness or lethargy.

Benefits
- Massage can benefit a client with hypertension if they are able to exercise safely. More caution is needed if hypertension is advanced.
Circulatory System Pathology

Varicose veins  Permanently distended superficial legs veins.
Circulatory System Pathology

Varicose veins  Permanently distended superficial legs veins.

Risks
- Very extreme, distorted, and twisted varicose veins are a local contraindication for massage.

Benefits
- Gentle gliding pressure can be beneficial if the skin over the varicose veins is intact and healthy,
- Alternating hot and cold hydrotherapy can be beneficial if the condition is mild.
Circulatory System Pathology

Heart attack (AKA: myocardial infarction)  Damage to the myocardium caused by obstructed coronary vessels.
Circulatory System Pathology

Heart attack (AKA: myocardial infarction)  Damage to the myocardium caused by obstructed coronary vessels.

Risks
- Any client who is fragile or must exercise with great care, may not be able to adapt to the changes that rigorous massage demands.

Benefits
- Gentle, supportive massage is appropriate for pain and anxiety that goes along with heart disease surgery.
- Any client with a history of heart problems but who is physically active can probably adapt to the changes that massage demands.
Circulatory System Pathology

**Heart failure**  Progressive loss of cardiac function resulting in the heart not being able to keep up with the needs of the body.
Circulatory System Pathology

Heart failure  Progressive loss of cardiac function resulting in the heart not being able to keep up with the needs of the body.

Risks
- Most heart failure clients have a history of cardiovascular problems that contribute to their problems.
- Any massage that requires them to adapt to changing environments may be too challenging to receive safely.
- Accommodations must also be made for heart failure medications, many of which have dizziness and lethargy as side effects.

Benefits
- Gentle or energetic bodywork that invites rather than imposes change may help to reduce blood pressure and perceived stress.
Lymphatic System Pathology

**Edema**  Accumulation of excessive fluid between cells.
Lymphatic System Pathology

Edema  Accumulation of excessive fluid between cells.

Risks
 Edema contraindicates all but the lightest bodywork.

Benefits
 Sub-acute or post-acute musculoskeletal injuries may have long-term edema that hydrotherapy and massage can help to resolve safely.

Options
 Lymphatic work from a highly trained practitioner is appropriate.
Lymphatic System Pathology

Allergic reactions  Immune system reactions to stimuli.
Lymphatic System Pathology

Allergic reactions  Immune system reactions to stimuli.

Risks
- Acute swelling that inhibits breathing requires medical intervention.
- Practitioners must have hypoallergenic lubricants for clients.

Benefits
- Massage can help exhaustion due to chronic allergies.
- Reducing inflammation in the sinuses and throat is helpful.
Lymphatic System Pathology

Fever (AKA: pyrexia)  Abnormally high (>101°F) body temperature.

Risks
- Fever contraindicates massage.
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Benefits
- Gentle or reflexive bodywork may be supportive.
Lymphatic System Pathology

**HIV**  Human immunodeficiency virus. Causes AIDS.

**AIDS**  Acquired immune deficiency syndrome. Attacks the immune system.

**Communicability**
- Exchange only by way of intimate fluids (not sweat, saliva, or tears)

**Risks**
- Client may have potentially contagious opportunistic disease.
- Client is highly susceptible to contagious disease.

**Benefits**
- Asymptomatic HIV indicates massage.
- Massage can boost immune system activity and efficiency.
- Clients with advanced AIDS can benefit from massage provides support and comfort.
Lymphatic System Pathology

Multiple sclerosis  T cells, B cells, antibodies, and cytokines destroy myelin sheaths in the spinal cord and brain.
Lymphatic System Pathology

**Multiple sclerosis**  T cells, B cells, antibodies, and cytokines destroy myelin sheaths in the spinal cord and brain.

**Risks**
- Massage that is too deep or too fast can cause muscle spasms.
- Sudden changes in pressure or temperature may be difficult to process.

**Benefits**
- Massage improves sleep and management of stress and depression.
Lymphatic System Pathology

Psoriasis  Non-contagious chronic skin condition involving excessive production of skin cells.
Lymphatic System Pathology

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Lymphatic System Pathology

Psoriasis  Non-contagious chronic skin condition involving excessive production of skin cells.

Risks
- Massage may make itchy lesions itchier.
- Open lesions are locally contraindicated for massage.

Benefits
- Massage can be a welcome experience for someone who has had trouble with their skin.
- Stress can be a significant trigger. Massage can reduce stress.
- Intact and non-irritated skin is safe and appropriate.

Options
- Choose a hypoallergenic lubricant for clients with psoriasis.
Lymphatic System Pathology

Rheumatoid arthritis  Autoimmune condition. Synovial membranes of various joints are attacked by immune system cells.
Lymphatic System Pathology

Rheumatoid arthritis  Autoimmune condition. Synovial membranes of various joints are attacked by immune system cells.

Risks
- In its acute (flare) phase, this is an inflammatory condition.
- Rigorous circulatory work during a flare is not appropriate.

Benefits
- Gentle, soothing, reflexive work may help ease the flare.
- Heat and gentle manipulation of painful joints can be helpful.
- Massage can be effective for pain, stress, and muscle tension.

Options
- Painless passive range of motion can maintain flexibility.
- Special attention to the muscles and tendons is effective.
Circulatory and Lymphatic System Pathology