Blood Clot Symptoms & Massage Therapy

A Webinar with Tracy Walton, MS, LMT

Part 1 of the Common Cardiovascular Conditions Webinar Series

Background

• Author
• Educator
• Researcher
• Massage Therapist
• Specialist in massage therapy and cancer care

Learning Objectives

• How to recognize DVT red flags
• Questions to ask clients
• How to modify massage
• When to refer
• How to talk with client about DVT
Pretest

1. Suppose you have a client with DVT symptoms behind the knee. Where should you limit your pressure, joint movement, or contact?
   a. On the foot, lower leg, and knee of the affected side
   b. On both lower extremities
   c. On the knee, thigh, and hip of the affected side
   d. On the symptomatic area only

Pretest

2. Which of the following is a sign of DVT AND of inflammation?
   a. Palpable cord
   b. Swelling
   c. Superficial venous dilation
   d. Cyanosis in nailbeds

Pretest

3. Which of the following should NOT be used to assess possible DVT?
   a. Observe the tissues for swelling or superficial venous dilation
   b. Ask about pain in the calf after performing passive dorsiflexion
   c. Inquire whether pain in the lower extremity worsens with standing or walking
   d. Look for discoloration of the skin—either blue or red—in the area
Pretest

4. Which of the following client scenarios always indicates a call to emergency services (911)?
   a. Client comes in with blood clot diagnosis
   b. DVT symptoms or signs
   c. Signs of pulmonary embolism
   d. Blood thinning treatment

Pretest

5. Which of the following is essential before increasing your overall massage pressure with a client who is taking blood thinners?
   a. Signs and symptoms of deep vein thrombosis
   b. The physician’s approval of deeper pressure
   c. Increased risk of venous thromboembolism
   d. Bruising and bleeding at heavier pressure

Pretest

6. Which of the following best describes massage pressure level 1?
   a. Lots of lotion or oil is needed to avoid drag on the tissue
   b. Pressure is typically used to spread or distribute lotion evenly
   c. Only skin movement occurs, no movement of muscles
   d. All of the above describe massage pressure level 1
What is DVT?

Deep = in a deep vein (not superficial)
Venous = in a vein (not an artery)
Thrombosis = condition of having a clot (thrombus)

Other Terms

Phlebitis
Inflamed vein

Thrombophlebitis
Inflammation of a vein and presence of a blood clot

Other Terms

Embolus
Moving body (clot, gas bubble, fat), traveling through the blood
Other Terms (Complications)

Pulmonary embolism (PE)
Movement of a dislodged clot to an artery or arteriole of the lungs

Venous thromboembolism (VTE)
Disease consisting of DVT and PE

Chronic venous insufficiency
Valves stretched apart, blood pools, swelling, heaviness, tiredness, achiness, pain

Pulmonary embolism (PE)
Movement of a dislodged clot to an artery or arteriole of the lungs

Where Does DVT Occur?

- Lower extremities
  - Upper extremities
  - Pelvic veins
  - Mesenteric veins

Most common; Focus of webinar
Signs and Symptoms of DVT
(in Extremity)

- Pain
- Tenderness
- Swelling
- Warmth
- Redness
- Dilation of superficial veins
- Palpable cord
- Cyanosis in nailbeds, skin
- Fever of unknown origin (low-grade)

Treatment of DVT
Anticoagulation-Thinning the Blood

**Heparin – Anticoagulant** (Blood thinner)
- Injections of enoxaparin (Lovenox), dalteparin (Fragmin)
- Inhibit clot formation, growth
- Can cause bruising and bleeding
- Acute treatment

**Warfarin (coumadin) - Anticoagulant** (Blood thinner)
- Inhibits clot formation, growth
- Oral drug used for maintenance to prevent clots;
- Cause bruising and bleeding

**Treatment of DVT**
Anticoagulation-Thinning the Blood

**Antiplatelets** (Aspirin, Plavix)
- Inhibits platelet action
- Oral drugs used to prevent clots; can cause mild bruising and bleeding

**Thrombolytics**
- “Clotbuster,” tPA, decreases size of clot
- For acute, severe situations (massive PE, heart attack, stroke)
- Can cause severe bruising and bleeding
Treatment of DVT

Thrombectomy (surgical removal)

Umbrella filter (IVC filter)
Prevent movement of clot through Inferior Vena Cava

Compression stockings

Where Does Massage Fit In?

• How do we assess what to do?
• Who gets massage?
• Who gets referral? How do we refer?
• What do we say to client?
• What about massage for someone with DVT history?
• Massage for people in treatment for DVT?

What Most of Us were Taught...

DVT

Don’t Touch Them!
What Do We Do?  
Several Scenarios

• Diagnosed DVT
• DVT symptoms or signs, but no diagnosis
• Pulmonary embolism
• In treatment for DVT

Focus on Lower Extremity DVT

But Before We Do That...

Most of our massage modifications involve massage pressure

Review the Massage Therapy Pressure Scale

The Massage Pressure Scale

Classifies massage pressures:

• Layperson terms
• Tissues displaced
• Common uses
• Therapist body use

(From Walton, T. Medical Conditions and Massage Therapy: A Decision Tree Approach. Philadelphia: Lippincott Williams & Wilkins, 2011.)
The Massage Pressure Scale

**Pressure Level 1**

“Light Lotioning”
- Pressure used to spread/distribute lotion
- Skin movement only, if at all
- Lots of lotion needed to avoid drag
- Slow speed needed to monitor

**Pressure Level 2**

“Heavy Lotioning”
- Pressure used to rub lotion in
- Skin moved, slight movement of adipose and superficial skeletal muscles

**Pressure Level 3**

“Medium Pressure”
- Used to warm up muscles for deeper work
- Body mechanics needed; adjacent joints rock
- Effleurage and petrissage thought to be “circulatory” at this pressure and above
The Massage Pressure Scale

<table>
<thead>
<tr>
<th>Pressure Level</th>
<th>&quot;Strong Pressure&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>- &quot;Deep tissue&quot;</td>
</tr>
<tr>
<td></td>
<td>- Good body mechanics and strength</td>
</tr>
<tr>
<td></td>
<td>- Movement of deep layers of muscle, fascia, tendon, adipose, blood vessels</td>
</tr>
</tbody>
</table>

The Massage Pressure Scale

<table>
<thead>
<tr>
<th>Pressure Level</th>
<th>&quot;Deep Pressure&quot;</th>
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<tbody>
<tr>
<td>5</td>
<td>- &quot;Deep tissue&quot;</td>
</tr>
<tr>
<td></td>
<td>- Movement of deepest layers of muscle, fascia, adipose, blood vessels</td>
</tr>
<tr>
<td></td>
<td>- &quot;Bone and bone&quot; engagement, move as one</td>
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What Do We Do?
Several Scenarios

Diagnosed DVT
DVT symptoms or signs, but no diagnosis
Pulmonary embolism
In treatment for DVT
What Do We Do?
Several Scenarios

Diagnosed DVT
DVT symptoms or signs, but no diagnosis
Pulmonary embolism
In treatment for DVT

Pulmonary Embolism
(signs & symptoms)

Sudden shortness of breath
Rapid breathing
Chest pain
Cough
Coughing up blood
Cyanosis lips/fingers
Feeling of doom
Collapse

Massage Therapy Guidelines
Emergency (911)
DVT Signs & Symptoms (no dx)

- Pain
- Tenderness
- Swelling
- Warmth
- Redness
- Superficial veins dilated
- Palpable cord
- Cyanosis in nailbeds, skin

Massage Therapy Guidelines

- Avoid pressure > level 1 on lower extremities
- Avoid joint movement on lower extremities
- Avoid contact with lower extremities
- Medical Referral

Seraphina’s Story

- 65 year old male client
- Lower leg swollen, protrusion, discoloration
- Client and employer insisted on deep pressure on swelling
- MT refused, compromised, made medical referral
- Blood clot diagnosed

My Story

- 38 year old client
- Post-bone marrow transplant
- 15+ medications
- Fluid imbalance
- Called about swollen, red, warm leg around knee
- Would I massage it?
- Blood clot diagnosed
What do Stories Have in Common?

- Multiple DVT signs/symptoms
- Swelling, redness, pain
- In both cases, MTs felt pressure to massage
- Both MTs were conservative
  - Seraphina refused pressure on area
  - I refused contact on lower extremities
- Both urged medical referrals
- DVT ultimately diagnosed, both cases

What about Less Obvious Symptoms?

A single sign or symptom
- “Just pain”
- “Just puffiness in my left leg”

What about Obvious Symptoms That Could Signal Some Other Problem?
Range of Responses

1. Massage with no modification

2. Slight modification
   (no joint movement and limit to pressure level 1 on lower extremities)
   Follow with urgent medical referral

3. Significant modification - liability precaution
   (no contact with lower extremities)
   Follow with urgent medical referral

4. Immediate medical referral, end session

DVT Signs & Symptoms

- Pain
- Tenderness
- Swelling
- Warmth
- Redness
- Superficial veins dilated
- Palpable cord
- Cyanosis in nailbeds, skin
- Fever of unknown origin (low-grade)

A Little Inflammation Perspective

Massage should not aggravate inflammation

Especially unexplained or undiagnosed inflammation
A Little Inflammation Perspective

Ask Questions

Use Answers, Observations To Plan Response
1. Massage with no modification
2. Slight modification (no joint movement and limit to pressure level 1 on lower extremities) Follow with urgent medical referral
3. Significant modification - liability precaution (no contact with lower extremities) Follow with urgent medical referral
4. Immediate medical referral, end session

Least Conservative

Most Conservative
**What Increases Your Concern?**

- Swelling
- Superficial venous dilation
- More than one sign/symptom
- Severe sign/symptom
- New/unfamiliar signs/symptoms
- Any sign/symptom!
- A sign/symptom PLUS elevated DVT risk

**What To Say to Client?**

- Because of [identify sign/symptom]
- I have concern
- Could be minor
- Could be serious (like a blood clot in a vein)
- I cannot say either way, cannot diagnose
- I recommend calling/seeing your doctor, ask what to do
- In the meantime, I should not press on that area or on other leg

**What NOT to Do: Homans Sign**

- Passive dorsiflexion produces pain in posterior low leg
- Not a sensitive or specific test
- Falling out of use

  Do not use it to test for DVT
What Do We Do?
Several Scenarios

- Diagnosed DVT
- DVT symptoms or signs, but no diagnosis
- Pulmonary embolism
- In treatment for DVT

Adjusting Massage to DVT Treatment

Some of Us were Taught...

**Blood Thinners** ➔ **Can’t Massage Them**

Adjusting Massage to DVT Treatment

- DVT treatment involves blood thinning
- Blood thinning -> Bruising and Bleeding (B&B)
- How do you adapt massage?

**Overall Massage Pressure!**
**Summary of DVT Treatments and Massage Guidelines**

<table>
<thead>
<tr>
<th>DVT</th>
<th>Medical Treatments</th>
<th>Limit OVERALL Pressure</th>
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<tbody>
<tr>
<td></td>
<td>Heparins</td>
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<td>Warfarin</td>
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<td>Antiplatelets</td>
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<td>Thrombolitics</td>
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<td>Thrombectomy</td>
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<td>Vena cava filter</td>
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<td></td>
<td>Compression stockings</td>
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<table>
<thead>
<tr>
<th>Effects of Treatments</th>
<th>Massage Therapy Guidelines</th>
</tr>
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<tbody>
<tr>
<td>Some risk of B&amp;B</td>
<td>Pressure max 1-2, up to 3 w/MD app</td>
</tr>
<tr>
<td>Slight risk of B&amp;B</td>
<td>Pressure max 1, only w/MD app after surgery</td>
</tr>
<tr>
<td>Slight risk of B&amp;B</td>
<td>Pressure max 1, only w/MD app after surgery</td>
</tr>
<tr>
<td>Surgery complications</td>
<td>Pressure max 2-3, up to 4 w/MD app</td>
</tr>
<tr>
<td>DVT risk continues</td>
<td>Pressure max 1-2, up to 3 w/MD app</td>
</tr>
<tr>
<td>Warm, uncomfortable</td>
<td>Use care with lubricant</td>
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</tbody>
</table>

**B&B** = bruising, bleeding  
**MD app** = Physician approval

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**Our Role**

- Recognize red flags
- Assess our level of concern
- Communicate concern
- Adapt massage
- Medical referral

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**Our Role**

- Expand our focus
  - from dislodging a clot
  - to recognizing possible clot and referral
- Do the best we can, without diagnosing
- Keep learning about DVT!
  - Visit DVT websites
  - Read up
- MTs have a positive contribution to make
References


Thank you!
Questions?
Contact Information

Tracy Walton at www.tracywalton.com

Reach us at info@tracywalton.com

Additional Questions on Facebook

Facebook.com/DrBenBenjamin

Some questions I cannot answer
Some questions I can answer
Blood Clots, Blood Pressure, and Heart Disease
Common Cardiovascular Conditions and Massage

Other Webinars in this Series
1. Blood Clot Symptoms and Massage Therapy
2. Blood Clot Risk and Massage Therapy
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5. Congestive Heart Failure and Massage Therapy
6. Cardiovascular Condition Case Studies

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