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

Tracy Walton
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

<table>
<thead>
<tr>
<th>Pressure Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong></td>
<td>“Light Lotioning”</td>
</tr>
<tr>
<td></td>
<td>- Pressure used to <strong>spread/distribute</strong> lotion</td>
</tr>
<tr>
<td></td>
<td>- Skin movement only, if at all</td>
</tr>
<tr>
<td></td>
<td>- Lots of lotion needed to avoid drag</td>
</tr>
<tr>
<td></td>
<td>- Slow speed needed to monitor</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pressure Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2</strong></td>
<td>“Heavy Lotioning”</td>
</tr>
<tr>
<td></td>
<td>- Pressure used to <strong>rub lotion in</strong></td>
</tr>
<tr>
<td></td>
<td>- Skin moved, slight movement of adipose and superficial skeletal muscles</td>
</tr>
</tbody>
</table>
### The Massage Pressure Scale

<table>
<thead>
<tr>
<th>Pressure Level</th>
<th>“Medium Pressure”</th>
</tr>
</thead>
</table>
| 3              | - 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 |

<table>
<thead>
<tr>
<th>Pressure Level</th>
<th>“Strong Pressure”</th>
</tr>
</thead>
</table>
| 4              | - “Deep tissue”  
                 - Good body mechanics and strength  
                 - Movement of deep layers of muscle, fascia, tendon, adipose, blood vessels |
The Massage Pressure Scale

Pressure Level

5

“Deep Pressure”
- “Deep tissue”
- Movement of deepest layers of muscle, fascia, adipose, blood vessels
- “Bone and bone” engagement, move as one

What Do We Do? Several Scenarios

Diagnosed DVT
DVT symptoms or signs, but no diagnosis
Pulmonary embolism
In treatment for DVT
What Most of Us were Taught...

DVT

Don’t Touch Them!

**Signs & Symptoms**
- Pain
- Tenderness
- Swelling
- Warmth
- Redness
- Superficial veins dilated
- Palpable cord
- Cyanosis in nailbeds, skin
- Fever of unknown origin

**Complications**
- Pulmonary embolism (PE)
- Chronic venous insufficiency

**Medical Treatments**
- Heparins
- Warfarin
- Antiplatelets
- Thrombolytics
- Thrombectomy
- Vena cava filter
- Compression stockings

**Effects of Treatments**
- Some risk of B&B
- Some risk of B&B
- Slight risk B&B
- HIGH risk B&B
- Surgery complications
- DVT risk continues
- Warm, uncomfortable

**Massage Therapy Guidelines**
- Medical referral
- Avoid contact with lower limbs (BOTH)
- Emergency referral (911)
- Pressure max 1 on affected limb
- Pressure max 1-2; up to 3 w/MD app
- Pressure max 2-3; up to 4 w/MD app
- Pressure max 1, only w/MD app
- Use care after surgery
- Avoid pressure at abd; DVT Risk
- Use care with lubricant

B&B = bruising, bleeding
MD app = Physician approval
Diagnosed DVT (in lower extremity)

Massage Therapy Guidelines
Avoid pressure > level 1 on lower extremities
Avoid joint movement on lower extremities
Avoid contact with lower extremities

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)

What Do We Do?
Several Scenarios

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

Pain? Tenderness? Worsen w/standing, walking?
Swelling?
May I look at it?
Any fever?
Onset of Sx? Happened before? Come and go?
Explainable?
Doctor know about it? What do they say?
Any history of vascular problems?
(Such as a blood clot?)
Any DVT risk factors? [List]

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

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

---

### Our Role

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


References


Thank you!
Questions?
Just released!


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
3. Hypertension, Hypotension, and Massage Therapy
4. Angina, Heart Attack, and Massage Therapy
5. Congestive Heart Failure and Massage Therapy
6. Cardiovascular Condition Case Studies
**CONTEST**

**How to enter:**
- Write a review of a “Cardiovascular Conditions” webinar on Facebook ([www.facebook.com/drbenbenjamin](http://www.facebook.com/drbenbenjamin))
  You’re eligible for one entry per webinar

**What you can win:**
- Autographed copy of “Medical Conditions and Massage Therapy: A Decision Tree Approach”
- A complete set of the “Cardiovascular Conditions and Massage” webinar series to give to a friend or colleague

---

**Other Webinars Available on Demand**

Unraveling the Mystery of Low Back Pain
Unraveling the Mystery of Cervical Pain
Unraveling the Mystery of Shoulder Pain
Unraveling the Mystery of Hip & Thigh Pain
Unraveling the Mystery of Knee Pain
Unraveling the Mystery of Ankle Pain
Massage in Cancer Care
Upper Body Disorders
Anatomy Trains

*All Webinars Available at [www.benbenjamin.com](http://www.benbenjamin.com)*
SPECIAL OFFER

JOIN the Benjamin Institute E-Mailing List & Receive a FREE Ebook on the Low Back

Go to: www.benbenjamin.com
And click “Join Our Mailing List”

Education in Paradise
Courses in Costa Rica

Beautiful Pura Vida retreat center
2 full days off per course
Relaxing day trips & active outings
African drumming, salsa dancing, yoga

To register, call 866-331-7246