Hypertension, Hypotension, and Massage Therapy

A Webinar with Tracy Walton, MS, LMT

Part 3 of the Common Cardiovascular Conditions Webinar Series

Background

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

Last 2 webinars: Blood clot symptoms & signs, and blood clot risk
This webinar: Hypertension (and hypotension)
Learning Objectives

• Important questions to ask clients with hypertension
• What research says (and does not say) about massage and blood pressure
• Some common antihypertensive drugs, and adapting massage to side effects
• Why adapting to hypotension is as important as adapting to hypertension

Pretest

1. Which of the following describes the Plaque Problem Principle?
   a. If atherosclerosis is identified or likely, use cautious pressure on the lower extremities
   b. If atherosclerosis is identified or likely, use cautious pressure on the arterial pulse points
   c. If atherosclerosis is identified or likely, do not touch the neck, face, or head
   d. If atherosclerosis is identified or likely, press deeply on the lower extremities

Pretest

2. What does the body of massage therapy research conclude about massage and blood pressure?
   a. A single session of massage therapy raises blood pressure in normotensive individuals, but the effect does not last over time
   b. The evidence does not say whether massage therapy lowers blood pressure in hypertensive individuals over time
   c. Evidence concludes that a course of massage therapy can raise blood pressure in normotensive individuals over time
   d. A single session of massage therapy lowers blood pressure in hypertensive individuals over time
Pretest

3. Why is it important to consider massage adaptations for hypotension when working with a client who has hypertension?
   a. Research proves that massage causes hypotension
   b. People with hypertension may request massage to help lower it
   c. Some antihypertensive drugs may cause hypotension
   d. Massage causes vasoconstriction, which raises blood pressure

Pretest

4. Why should a massage therapist ask a client whether his/her hypertension is well-controlled?
   a. If blood pressure is stable, then the massage session should be gentle overall
   b. If blood pressure is unstable, massage might help stabilize it
   c. The therapist should use even rhythms and slower speeds for poorly controlled blood pressure
   d. The therapist should use gradual transitions and gentle massage overall for well-controlled blood pressure

Pretest

5. Which of the following reflects a massage adaptation to the effects of antihypertensive medication?
   a. Position for comfort and offer a gentle session overall for headache or GI upset
   b. Urge a client with diarrhea to drink as much water as possible
   c. Schedule massage an hour or two after a client has taken a diuretic
   d. Use joint movement instead of massage for a session with someone who is nauseated
Pretest

6. Which of the following symptoms or signs, when seen in an individual with hypertension, suggest an emergency medical referral?
   a. Vision changes such as blurred vision
   b. Faintness or fainting
   c. Headache
   d. All of the above suggest an emergency medical referral

What is Hypertension?

High blood pressure
Excessive pressure of blood on vessel walls
Caused by 3 conditions
   1. From tension/tightness of vessel walls (rigidity, vasoconstriction)
   2. From greater volume of blood pushing through vessels
   3. Both

Other Terms

Secondary hypertension
Caused by another condition (such as kidney disease)

Essential hypertension
No identifiable cause
The Web of Cardiovascular Conditions

Cardiovascular conditions often “Run in Packs.”

The Cardiovascular Conditions Often “Run in Packs” Principle

If one cardiovascular condition is present, be alert for others.

Features of Hypertension

**Causes** unclear

**Clear risk factors**

- Modifiable: Diet (fat, salt), smoking, obesity, stress, exercise

- Non-modifiable: Age, family history
Classifying Blood Pressure Levels

<table>
<thead>
<tr>
<th>Classification</th>
<th>Systolic</th>
<th>Diastolic</th>
<th>Medical Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>&lt;120</td>
<td>&lt;180</td>
<td>None. Recheck every 2 yr.</td>
</tr>
<tr>
<td>Prehypertension</td>
<td>120-139</td>
<td>80-89</td>
<td>Lifestyle advice, recheck in 1 yr.</td>
</tr>
<tr>
<td>Stage 1 (Mild)</td>
<td>140-159</td>
<td>90-99</td>
<td>Recheck in 1 mo.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lifestyle advice if persists 6 mos.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Low dose BP meds</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(diuretics at 1st)</td>
</tr>
<tr>
<td>Stage 2 (Moderate to Severe)</td>
<td>160+</td>
<td>100+</td>
<td>Reevaluate 1 mo. 2 BP meds used</td>
</tr>
</tbody>
</table>

Medications for Hypertension

- Beta-Blockers
- Diuretics
- ACE Inhibitors
- Angiotensin II Receptor Blockers
- Calcium Channel Blockers
- Vasodilators

Mechanisms of Drug Treatments

- **Diuretics** – move water from blood to urine
- **Beta-Blockers** – slow impulses through heart
- **ACE Inhibitors** – lower salt & water in body; interfere with vasoconstriction
- **Angiotensin II Receptor Blockers** – interfere with vasoconstriction
- **Calcium Channel Blockers** – relax vessels by slowing calcium flow into walls
- **Vasodilators** – dilate vessels
Effects of Drug Treatments

Hypotension
Orthostatic hypotension
Frequent urination
Swelling
Nausea
Headache
Diarrhea

No One-Size-Fits-All Approach

Massage Therapy Guidelines

ANY CHANGES IN MASSAGE ELEMENTS?
- Contact
- Lubricant
- Pressure
- Joint Movement Friction
- Position
- Site of massage
- Draping
- Speed
- Rhythm
- Session length
- Session timing
- Session intent
- Medical consultation
- Medical referral
Persistent high blood pressure

Limit abdominal pressure to level 2 max; care with positioning at abdomen (vaso-vagal response)

Follow “Plaque Problem Principle”

What is the “Plaque Problem Principle?”

If atherosclerosis is identified, or is likely to be present...

...use cautious pressure at arterial pulse points...

(As in the case of hypertension)
What is the “Plaque Problem Principle?”
If atherosclerosis is identified, or is likely to be present...
...use cautious pressure at arterial pulse points...
...In particular, limit pressure at or near the carotid arteries.

Massage Guidelines for Hypertension

<table>
<thead>
<tr>
<th>Essentials</th>
<th>Massage Therapy Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-hypertension or mild (Stage 1) hypertension</td>
<td>Consider following DVT Risk Principles (inquire about risk factors)</td>
</tr>
</tbody>
</table>

Massage Guidelines for Hypertension

<table>
<thead>
<tr>
<th>Essentials</th>
<th>Massage Therapy Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 2 hypertension</td>
<td>Follow DVT Risk Principles</td>
</tr>
</tbody>
</table>
DVT Risk Principle 1

If there is an elevated risk of thrombosis, use cautious pressure (level 1 or 2 maximum) on areas of risk and avoid joint movement in these areas.

DVT Risk Principle 2

Follow DVT Risk Principle 1 until client’s MD:

1. **Assesses** client’s DVT risk
2. **Understands concern** about disturbance by direct pressure/joint mvt
3. **Speaks directly to your concerns** about massage & DVT
4. **Approves** direct pressure/joint mvt in area

The Massage Pressure Scale

Classifies massage pressures:

- Simple 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.)
**Massage Guidelines for Hypertension**

**Essentials**

- Poorly controlled or unstable BP

**Massage Therapy Guidelines**

- Overall:
  - Use slow speeds
  - Gradual transitions
  - Even rhythms
  - Gentle overall
  - Check with physician

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**Massage Guidelines for Hypertension**

**Complications**

- Headache
- Vision changes
- Fainting

**Massage Therapy Guidelines**

- Emergency medical referral

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**Massage Guidelines for Hypertension**

**Complications**

- ANY complication (heart disease, heart failure, heart attack, stroke, kidney failure, aortic aneurysm)

**Massage Therapy Guidelines**

- Follow DVT Risk Principles
- Adapt to complication

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Massage Guidelines for Hypertension

<table>
<thead>
<tr>
<th>Complications</th>
<th>Massage Therapy Guidelines</th>
</tr>
</thead>
</table>
| Swelling      | Avoid general circulatory intent  
(Avoid pairing kneading, stroking, repeated compressions with pressures of 3 and above) |

A Nod to Hypo tension

**Hypotension** = Low blood pressure

**Orthostatic or postural hypotension**
- BP drops upon standing
- Dizziness
- Faintness
- Blurred vision

Can be a side effect of Antihypertensives
A Nod to Hypo tension

Hypotension = Low blood pressure

Orthostatic or postural hypotension
BP drops upon standing

End session with stimulating speed, rhythm
Have client sit a few minutes before standing at end of session

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Massage Guidelines for Antihypertensives?

**Medical Treatments**
- Diuretics
- Beta-blockers
- ACE inhibitors
- Angiotensin II receptor blockers
- Calcium channel blockers
- Vasodilators

**Effects of treatment**
- Hypotension
- Frequent urination
- Headache
- GI upset, heartburn
- Nausea
- Diarrhea
- Swelling

**Massage Therapy Guidelines**
Depends on the side effect for each client

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Effects of Treatments

- Hypotension
- Frequent urination
- Headache
- GI upset, heartburn
- Nausea
- Diarrhea
- Swelling

Massage Therapy Guidelines

- End session with stimulating speed, rhythm
- Slow rise from table
- Schedule massage around meds; easy bathroom access
- Position for comfort; gentle session overall
- Position for comfort; gentle session overall; limited or omit joint movement; even rhythms, slow speeds
- Gentle overall; avoid pressure at abdomen; bathroom access; be alert for dehydration
- Avoid circulatory massage at site, overall
Ask Questions

When were you diagnosed? How recently/often see MD?
If diagnosed longer ago, is closely monitored, and was recently seen by dr., client may be more familiar with condition or have fresh information.
If longstanding, complications more likely.

Ask Questions

When were you diagnosed?
Your usual BP reading? Stable, well-controlled?
If unstable, poorly controlled, use slow speeds, even rhythms, gradual transitions, gentler overall; consult with client’s physician.

Ask Questions

When were you diagnosed? How recently/often see MD?
Your usual BP reading? Stable, well-controlled?
Complications? Effects on heart?
Other CV conditions?
Adapt to heart condition
Adapt to aneurysm
Adapt to stroke history
Adapt to kidney failure.
Ask Questions

- When were you diagnosed?
- Your usual BP reading?  Stable, well-controlled?
- How often see MD?  How recently?
- Complications?  Effects on heart?
- Other CV conditions?
- History of stroke or “mini-stroke” (TIA)
  
  Again, adapt to effects of stroke

Ask Questions

- When were you diagnosed?
- Your usual BP reading?  Stable, well-controlled?
- How often see MD?  How recently?
- Complications?  Effects on heart?
- History of stroke or “mini-stroke” (TIA)
- Any swelling?
  
  Avoid general circulatory “intent”
  (Overall and at swelling site)

Ask Questions

- When were you diagnosed?
- Your usual BP reading?  Stable, well-controlled?
- How often see MD?  How recently?
- Complications?  Effects on heart?
- History of stroke or “mini-stroke” (TIA)
- Any swelling?
- Headaches, vision changes, fainting?
  
  Emergency medical referral
Ask Questions
When were you diagnosed?
Your usual BP reading? Stable, well-controlled?
How often see MD? How recently?
Complications? Effects on heart?
History of stroke or "mini-stroke" (TIA)
Any swelling?
Headaches, vision changes, fainting?
Diabetes? Kidney problems?
Adapt to diabetes meds, other complications; avoid general circulatory intent if kidney function ↓

Ask Questions
When were you diagnosed? How recently/often see MD?
Your usual BP reading? Stable, well-controlled?
Complications? Effects on heart?
History of stroke or "mini-stroke" (TIA)
Any swelling?
Headaches, vision changes, fainting?
Diabetes? Kidney problems?
Meds?
Adapt to side effects, including hypotension

Ask Questions
When were you diagnosed? How recently/often see MD?
Your usual BP reading? Stable, well-controlled?
Complications? Effects on heart?
History of stroke or "mini-stroke" (TIA)
Any swelling?
Headaches, vision changes, fainting?
Diabetes? Kidney problems?
Meds?
**Does Massage Help**
**High Blood Pressure?**
**What Does the Research Say?**

Difference between:
Massage lowering BP in normotensive people
vs. Massage helping hypertension

Small studies *suggest* massage might help lower BP, but…

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**Does Massage Help**
**High Blood Pressure?**

Most studies look at *pre-post* measurements
Need *sustained* measurements
Need to see sustained drops in *diastolic* BP
Need to see it in people with *hypertension* AND
Need a *BODY* of evidence (quantitative review or meta-analysis) not just a *few small studies*, to say for sure whether massage helps hypertension

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**Does Massage Help?**

No known *quantitative review* of the literature reports massage lowering blood pressure over time, in hypertensive individuals
Not enough evidence to say for sure!
Avoid Claiming…

“...Research demonstrates lowered blood pressure from massage”

“...Research proves massage lowers blood pressure”

“...Research shows massage helps hypertension”

A Fair and Accurate Claim about Massage and BP

The body of evidence on massage and blood pressure is small. Right now, the research does not provide any firm conclusions about effects of massage on hypertension.

A Fair and Accurate Claim about Massage and BP

Massage can reduce stress. As part of a program of lifestyle changes (including exercise and dietary changes), stress reduction can improve blood pressure control.
Summary
Massage can be used safely with people with hypertension
Take care at pulse sites
Take care at abdomen
Adapt to complications and other conditions
Adapt to side effects of medications
Keep claims responsible

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
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