



The Beat

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Recovering from a Blood Clot: What's Mental Health Got to Do With It?

Having a blood clot can be a life-altering event. Research shows that in addition to physical symptoms (such as pain or swelling), patients may experience a range of mental health issues after a clot, including [anxiety](#), [depression](#), and [post-traumatic stress disorder \(PTSD\)](#).

Last month (May 2021) was Mental Health Awareness Month, a campaign to fight stigma around mental illness. As part of this important initiative, we spoke with Dr. Kerstin de Wit to better understand the connection between blood clots and mental health. Dr. de Wit is an emergency room physician, thrombosis specialist, and researcher at Queen's University in Kingston, Canada.

Q: You recently published a [study](#) on the psychological impact of pulmonary embolism (PE), a blood clot in the lungs. What encouraged you to research this topic?

A: The mental health aspect of blood clots is something that I've thought about for many years. In both my clinic and the emergency department, patients who've previously had a blood clot will often return because they think they're having another one; they have a nagging pain, a tightness in their chest, maybe trouble breathing, and they're extremely worried. I usually find that these patients are *not* having another blood clot. However, I think I'm doing my patients a disservice by simply telling them that they're fine. What's important is helping them navigate the worry and anxiety that they're experiencing – but we don't really have a well-defined pathway to do that.

I also realized that I wasn't really addressing the "psychology of thrombosis" in my clinic, so the logical starting point for our study was trying to figure out how many of my patients were experiencing psychological distress. Beyond that, I also wanted to understand what type of effects patients encountered. For example, were they coping

Continued on page 3

Inside

Recovering from a Blood Clot: What's Mental Health Got to Do With It?1

Under Pressure: Compression Stockings 101.1

Upcoming Events2

In Case You Missed It4

NATF Board and Staff6



Under Pressure: Compression Stockings 101



Aaron Aday, MD, MS

Compression stockings are a specialized type of hosiery that help improve blood flow in the legs. By placing pressure on

the legs, the stockings prevent blood from pooling in the leg and encourage blood to flow freely to the heart.

Continued on page 2



Upcoming Events

Upcoming Virtual Support Groups

July 13, 2021

September 14, 2021

October 12, 2021

November 16, 2021

(There will be no support group in August.)

All support groups are at 7:00 PM EST

Ask the Expert Virtual Quarterly Forum

June 28, 2021, 7:00-8:00 PM EST

Our hosts will be Andrea Lewin, Themio Papadopoulos, and Beata Rucinski, all pharmacists who specialize in anticoagulation. They'll answer all of your questions about anticoagulation, such as starting and stopping anticoagulation for a dental procedure or surgery, anticoagulation in patients with cancer, anticoagulation and COVID-19, and much more!

To register for these virtual meetings, email events@natfonline.org or call 617-730-4120.



UNDER PRESSURE: COMPRESSION STOCKINGS 101

Continued from page 1

Compression stockings are most often used to:

- Relieve leg swelling
- Relieve leg pain and other symptoms due to circulatory problems
- Manage symptoms associated with **post-thrombotic syndrome (PTS)**



There are two types of compression stockings. *Uniform* stockings apply the same amount of pressure to the entire leg. *Graduated* stockings have the most pressure (and are tightest) at the ankle; the pressure gradually decreases as the stockings move up the leg.

"While not everyone needs to wear compression stockings, many of my patients feel better when they do," says Dr. Aaron Aday, a cardiologist and vascular

medicine specialist at Vanderbilt University Medical Center in Nashville, TN and NATF Medical Advisory Board member. "Compression stockings are one of the few therapies we have to help people with leg swelling, PTS, and other vein problems and they can help prevent leg fatigue from sitting or standing for a long time. Using stockings can be daunting at first, so I encourage people to work with their medical team to find the right stockings and to understand how and when to use them."

WHO TYPICALLY WEARS COMPRESSION STOCKINGS?

- Individuals who have leg swelling due to deep vein thrombosis (DVT)
- People who may have circulation problems (related to conditions like varicose veins)
- Patients who have just had surgery or are on bedrest
- People who frequently travel on long trips
- Individuals who are on their feet or at a desk for long periods of time
- Pregnant women

Compression stockings might not be the right option for the following people:

- Individuals with severe **peripheral artery disease**
- People with ulcers or wounds on their legs

Continued on page 5



with generalized anxiety or was their anxiety more extreme? Were they actually experiencing PTSD?

Q: What did you find, and did any of these findings surprise you?

A: We used a checklist-type questionnaire, which was given to patients on a tablet in the waiting room while they were waiting to be seen. About half of the patients who completed the questionnaire also agreed to be interviewed as part of their appointment in the clinic.

Based on the survey results and interviews, we found four primary associations with psychological distress:

- Many patients recalled their diagnosis as a traumatic experience. One participant said that the nurse pulled the curtain around and told him, "You're lucky to be alive." I mean, that's an important finding – that the person who tells you that you have a blood clot might potentially have a bearing on ongoing distress.
- The patients who had ongoing distress also remembered having very severe symptoms when they were first diagnosed. So, maybe severe pain or difficulty breathing plus the memory of those symptoms prompted ongoing trauma.
- People with distress were often worried about having another blood clot – or they were scared that they'd already had another one. The fear of recurrence was something that played heavily on their minds.
- Patients frequently preferred to stay on their blood thinners to prevent a future clot and also believed that their lives were somewhat reliant on taking the blood thinners; in other words, they worried that they may die if they stopped their blood thinner.

Importantly, we also found that two out of 72 people had a tentative diagnosis of PTSD. Some might say that two out of 72 is not a large number, but if you surveyed 72 people on the street, I don't know that you'd find two of them with PTSD. This study was not large in scale, but there's a signal there that after having a PE, there's psychological distress – sometimes very extreme psychological distress. Even more surprising was that 50% of people in our clinic reported having ongoing distress – and we weren't offering them any support.

Q: What would you tell patients who are coping with ongoing distress after a clot?

A: I really believe that patients will never have physical health unless they have mental health as well. The two are so closely related. To help patients live a full life, I think, we as healthcare providers have to address the mental health and psychology as well as the physical symptoms of blood clots. We need to start addressing these issues and have some solutions to offer patients, whether it's a referral to counseling or information on managing anxiety. Education is also fundamental and patients should know the facts about blood clots – what they are, how to treat them, how anticoagulation can help, etc.

Lifestyle is also extremely important. Everybody has things in life they like to enjoy, so I try to encourage patients as much as I can to get back to their activities safely. We know that being on a blood thinner can increase the risk of bleeding, so patients sometimes stop doing what they love because they're afraid of a bleed. My job is to have an open conversation with my patients about the risks of bleeding on an anticoagulant, but they ultimately have to weigh the pros and cons. I want people to go out for walks when they feel better and to then slowly return to other things that they enjoy.

It's also worth mentioning that the most common symptom after a blood clot is exhaustion and fatigue. So, be kind to yourself and rest when you need to. For the first couple of months, you might not feel like yourself; you might feel like resting is all you can do, and that's okay because that's part of this disease. Your body needs to rest and heal. Listening to yourself is important as well.

Our study also indicated to some extent that filling out the questionnaire in our clinic was the first time these patients admitted to having distress. Often, patients don't come forward to discuss their distress with their provider; they don't feel comfortable discussing mental health. If you do have questions or concerns, please tell us so that we can help.

Finally, I'd urge patients to participate in support groups if they can access them. These groups are immensely helpful. Patients have said to us, "I thought I was alone, I didn't realize anybody else felt



this way,” and these groups have made them feel like part of a community.

I’ll end with this: if you’ve had a blood clot, it definitely becomes part of your life story – but it should never define you or change you as a person because you’re still you. The person you were is the person you are after that blood clot. Psychological stress may also be part of your story, and that is nothing to be ashamed of. ■



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In Case You Missed It...

Check out our recent [Patient Pulse webinar](#) on mental health and blood clots.

In this roundtable discussion, a healthcare provider, a patient, and a friend of a patient share their stories and discuss techniques for managing the emotional burden of blood clots.



Dr. Marie Gerhard-Herman is a cardiologist and vascular medicine specialist at the Brigham & Women’s Hospital in Boston, MA. She has decades of experience in counseling patients on both the physical and psychosocial aspects of blood clots.



Mr. Peter Donati is a company executive, devoted husband and father, and an avid athlete who had a pulmonary embolism (PE) 4 years ago.



Ms. Christina Martin has not had a blood clot herself, but the love of her life passed away from a PE in 2014. She’s been dedicated to raising awareness around blood clots ever since.



WHAT SHOULD I KNOW BEFORE USING COMPRESSION STOCKINGS?

Not all compression stockings are the same! While you can easily find stockings online or at your local pharmacy, some stockings are available by prescription only. Like many over-the-counter medications and therapies, many stockings sold online or in a store are not equivalent to the stockings that are prescribed by a healthcare provider (HCP).

To get the most benefit from compression stockings, they must fit correctly. Your HCP can help you figure out both the right size and the amount of compression that you need.

Length and sizing: Stockings are available in knee-high and thigh-high lengths as well as in leggings or hose. Your HCP may prescribe different stockings depending on your personal situation. Several measurements may be collected to ensure proper fit, including the width of your ankles, length and width of your calves, the width of your thighs, and the overall length of your legs.

Amount of pressure: Stockings have different levels of tightness (compression). The amount of compression in stockings is described using millimeters of mercury (mmHg), which is a standard measure of pressure.

- *Mild compression (light support) = less than 20 mmHg:* Stockings up to 20 mmHg are typically sold online or in stores and are often used to relieve minor swelling or discomfort from standing for extended periods of time.
- *Mild-moderate compression = 20-30 mmHg:* These stockings are the most commonly prescribed and are often used to control swelling and pain following DVT or in people with varicose veins.
- *Moderate compression = 30-40 mmHg:* These stockings are typically used in people with more severe symptoms that are not controlled by stockings in the 20-30 mmHg range.
- *Firm compression = 40-50 mmHg:* These stockings are used in people with severe PTS or other vein problems, such as those with a history of [venous ulcers](#).



TIPS FOR EASY USE:

- Hand wash new stockings with a mild soap to make the material a bit more flexible.
- If affordable, consider buying more than one pair of stockings. That way, you'll have an extra pair on hand if the other pair becomes dirty or damaged.
 - Put your stockings on when you first wake up. (You'll typically have less swelling in your legs in the morning.) It helps to put stockings on with your back supported by a chair.
 - Turn most of the stocking inside out before pulling it up your leg. Then put your toes into the toecap of the stocking and gently roll the fabric up your leg.
 - Wearing rubber gloves may help you get a better grip on the fabric.

Compression stockings may cause some discomfort at first, but any soreness or aching should subside quickly if the stockings fit correctly. However, you should call your doctor immediately if you experience any numbness, significant pain, or discoloration in your legs or feet.

Compression stockings should be replaced every 5-6 months. If wearing a prescription pair, your insurance provider may cover some of the cost.

WHAT DOES THE EVIDENCE SAY?

"Data shows us that not everyone needs to use compression stockings after having a blood clot or undergoing surgery, especially if you've recovered quickly or are already on medication to prevent a recurrent blood clot," says Dr. Aday. "It's also not clear if compression stockings do help prevent PTS after a blood clot. However, many people feel better when using compression stockings, particularly if they experience swelling or discomfort due to vein issues. There's ongoing research to better understand who will benefit most from using compression stockings." ■



*Fighting blood clots
through education*

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