NATF North American Thrombosis Forum
Fighting blood clots through education

THE Beat

June 2023

A publication of the North American Thrombosis Forum

In This Issue:

Weight Loss Medications and Heart Disease Risk: What Do We Know?

Diabetes and obesity are two conditions that can raise the risk for both heart disease and blood clots. Now, a new class of medications called glucagon-like peptide-1 receptor agonists (aka **GLP-1s**) has been getting a lot of attention as a treatment for both diabetes and obesity.

Semaglutide, one of the more well-known GLP-1s sold under the brand names Ozempic®, Wegovy®, and Rybelsus®, was originally developed to treat diabetes – but weight loss was a common side effect, and GLP-1s are now used for that purpose. In fact, the FDA has approved two GLP-1s, Saxenda® (liraglutide) and Wegovy, specifically for weight loss in people who are significantly over-weight and experiencing health complications.

So how do GLP-1s affect the risk of having a heart attack, stroke, or blood clot? It will be a few more years before we have long-term data, but there's reason to believe that these medications do reduce the risk of heart disease – at least in some people.

GLP-1s have been studied the most in people with type 2 diabetes. A 2019 analysis of seven trials involving more than 50,000 patients found that taking these medications reduces the risk of a heart attack, stroke, or death due

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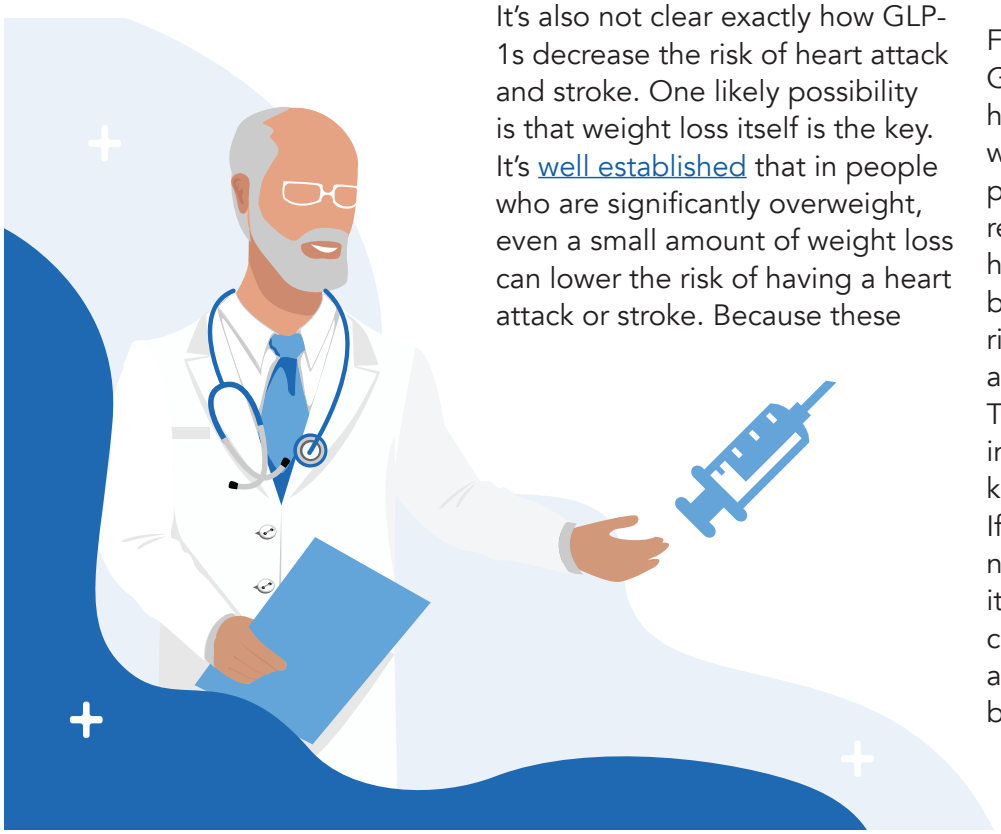
to heart disease by 12%. Although not an enormous decrease in risk, it's certainly significant. Another study published in 2023 also found a 12% lower risk in patients with diabetes who didn't have a history of heart failure, and a 15% reduction in those who had heart failure.

In fact, the American Heart Association (AHA) states that GLP-1s cause a "robust and consistent reduction" in heart attack and stroke risk in people with type 2 diabetes. The AHA now recommends that people with diabetes who are at a high risk for heart disease should take GLP-1s.



In people who don't have diabetes, there's less evidence to show the impact of these medications on heart disease risk. We don't have results from large clinical trials yet, so we can't be sure that GLP-1s will have the same effect on risk in people without diabetes compared to those who do have diabetes.

There *is* evidence that these medications reduce blood pressure and cholesterol in overweight people without diabetes, which would be expected to translate to a lower heart disease risk. But we'll have to wait for the results of larger studies to be sure.

It's also not clear exactly how GLP-1s decrease the risk of heart attack and stroke. One likely possibility is that weight loss itself is the key. It's well established that in people who are significantly overweight, even a small amount of weight loss can lower the risk of having a heart attack or stroke. Because these medications lead to weight loss, it's not surprising that they would also reduce cardiovascular risk.

And yet, researchers believe that there's more to the story. In addition to lowering blood pressure and cholesterol, GLP-1s also help to keep blood sugar under control, which reduces chronic inflammation and in turn reduces heart disease risk. There are ongoing studies to figure out exactly how these medications work and what mechanisms are at play.

It's important to note that GLP-1s are not considered a good option for everyone. They should be used with caution in people with a history of arrhythmias (abnormal heart rhythms) since there's some evidence that GLP-1s may exacerbate rhythm issues. These medications can also cause serious complications with the pancreas, thyroid, and kidneys – though these side effects are rare.

For now, it seems clear that GLP-1s can lower the risk of heart attack and stroke in people with type 2 diabetes, and there's promising data that they may also reduce risk in people who don't have diabetes. They're not a magic bullet, though; the reduction in risk is relatively modest and there's a small risk of serious side effects. These medicines are also self-injected, and some people aren't keen on giving themselves a shot. If you're considering trying these new weight loss medications, it's important to have an open conversation with your doctor about the potential risks and benefits.

Why Don't Bears Get Blood Clots?

Physical activity is one of the most important factors in preventing blood clots. In general, when you can't move around for a period of time (like after having surgery), your risk for blood clots rises.

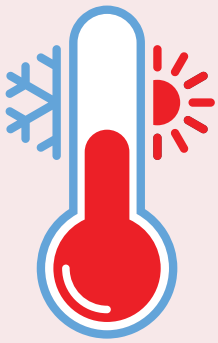
But bears spend all winter in a state of hibernation and don't get blood clots. Humans typically can't spend months curled up in bed half-asleep without getting clots – so why are bears able to do this?

A recent study published in the journal *Science* may shed some light on the subject. A Swedish team took blood samples from 13 brown bears who were hibernating in the winter. The researchers later took blood samples from the same bears during the summer.

They found that the levels of a protein called HSP47 were much higher in the summer, while this protein was virtually absent in the winter. HSP47 is involved in the blood clotting process.

In fact, levels of HSP47 are also lower in humans during extended periods of immobility. For example, in people with spinal cord injuries, HSP47 levels fall over time. This finding helps to explain why people who are immobilized for a short amount of time (like after surgery) have an increased risk for clots, while the clot risk is lower than expected in those who are immobile for longer.

It's hoped that further research into HSP47 will lead to new treatments that can reduce the risk of blood clots. Whether this research will allow humans to spend the winter in hibernation has yet to be determined – but if that's your dream, we may be one step closer.



Scan the QR code to access article references

Blood Clot Risk in the Transgender Community: A Message from Our Patient Advocates

This Pride Month, NATF is proud to update our readers about an initiative that we featured in this newsletter one year ago: *Assessing and Addressing the Risk of Blood Clots Across the Spectrum of Gender-Affirming Care*. Clinicians, researchers, and transgender patients from across the country came together to develop guidance on managing blood clot risk in transgender individuals, and their recommendations were published in the medical journal *Endocrine Practice* earlier this year.

As a key part of this initiative, NATF also established a patient advocacy committee to help raise awareness about blood clot risk in the transgender community. Our dedicated committee members, Andie, Dee Dee, Kelley, and Troy, are part of the transgender community and are excited to unveil the patient education campaign that they've spent the last year working on.

"Our committee is dedicated to improving the health and wellness of the transgender community by increasing awareness about the potential risk of blood clots along the gender-affirmation journey. We have developed some simple resources about blood clot risk to inform and empower those in our community. As an advocacy group, we value everyone's unique experiences and are committed to helping our community move forward in their journeys without fear and through the exchange of positive facts and information. At the end of the day, we all matter, and no one is alone!"

In the education toolkit, you will find fact sheets and videos that address:

- What is a blood clot?
- Risk factors for a blood clot
- Signs and symptoms of a blood clot
- How hormone therapy and surgery can raise blood clot risk
- How to talk to your medical team about blood clot risk if you're receiving hormone therapy or having surgery

NATF Patient Advocacy Committee

Andie M.
she/her

Dee Dee W.
she/her

Kelley B.
they/them

Troy K.
he/him

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Continued:
Blood Clot Risk in the Transgender Community

The key thing to take away from these resources is that the risk for blood clots ***IS not*** and ***SHOULD not*** be a barrier to gender-affirming care.

We thank the NATF community for supporting this important project.

Upcoming Patient Events

Support Group for Newly Diagnosed Patients

Hosted by Joelle Hochman, RRT, Chair of Patient Engagement & Education

We're pleased to offer a virtual support group experience specifically for patients who've recently had a blood clot.*

June 15, 2023

July 27, 2023

August 17, 2023

All meetings start at 7:00 PM EST

*This group is primarily geared towards patients who've had a blood clot in the past 12 months – but participants at any stage of diagnosis are welcome! If you're a longtime reader of *The Beat*, please help us spread the word about this support group! More information can be found on our website.

NATF Support Group

This virtual support group is designed for patients at all stages of their blood clot journey. If you had your blood clot 20 days ago or 20 years ago, we welcome you to join us!

June 13, 2023

All meetings start at 7:00 PM EST

Additional dates to be added soon

To register for these programs, please visit Patient Events on our website at https://thrombosis.org/events/patients/

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