



# The Beat

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## Is Sitting the New Smoking?

You might have heard that “sitting is the new smoking,” a phrase intended to draw attention to the health risks of both sitting and smoking. By now, we all know that smoking is very bad for you, but not everyone may be aware of how dangerous sitting may be. Many health experts are hoping to change that.

Is sitting really as bad as smoking? How bad is sitting for your health? Perhaps more importantly, what can you do to reduce your risk?



### THE HEALTH RISKS OF SITTING

For the purposes of this discussion, “sitting” doesn’t simply mean assuming a sitting position. Instead, we’re referring to sedentary behavior – long periods of time when you move minimally, or not at all. Many jobs, especially office jobs, involve sitting for most of the workday. Many people also spend most of their leisure time sitting while they watch TV, look at their phones, or read. (You might actually be lying down for some of that time, but it’s the inactivity that’s the important factor, not the sitting position itself.)

A [2018 study](#) found that sitting for more than eight hours per day was associated with the following increases in risk:

- Type 2 diabetes
- Cancer
- Heart disease or stroke
- Depression
- Overall risk of death

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## Provoked vs. Unprovoked Clots: What’s the Difference?



Venous thromboembolism (VTE) is a blood clot that forms in a vein. Clots most commonly form in the legs, but pieces of the clot can break off and move to the lungs, causing a pulmonary embolism

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(PE). PE is fatal in up to 30% of cases. For a person with a blood clot in a vein, once the initial clot has dissolved, it's important to reduce the risk of a future clot.

Doctors generally classify a venous blood clot as either "provoked" or "unprovoked." This distinction can have major implications for long-term treatment. So, what does it mean for a blood clot to be provoked or unprovoked? Is one type more dangerous than the other? How might this distinction affect your treatment plan?

### CAUSES OF PROVOKED BLOOD CLOTS

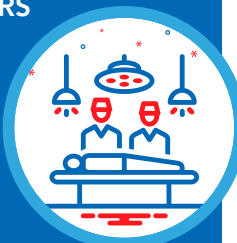


A blood clot is considered to be provoked when there's a clear trigger for the clot, while an unprovoked clot happens without an obvious cause. (See figure below.)

**FACTORS THAT MAY PROVOKE BLOOD CLOTS**

**TRANSIENT MAJOR RISK FACTORS**  
Things that are temporary but that greatly increase the risk of blood clots, such as major surgeries (30 minutes or longer of operating time), being in the hospital for 3 days or longer, and having a Cesarean section (C-section).

**TRANSIENT MINOR RISK FACTORS**  
Things that are temporary and have a smaller increase in the risk of blood clots. These include minor surgeries (less than 30 minutes long), hospitalizations of less than 3 days, pregnancy, estrogen therapy (such as birth control or hormone replacement), and reduced mobility for up to 3 days.

**PERSISTENT RISK FACTORS**  
Permanent or long-term conditions that increase the risk of blood clots. These include things like active cancer, chronic inflammatory diseases (like Crohn's disease and ulcerative colitis), and genetic conditions.

If you experience a blood clot and have an obvious risk factor, then your clot is considered provoked. Doctors will likely be able to pinpoint why the clot happened.

An unprovoked clot doesn't have a clear cause. In fact, unprovoked clots are sometimes called "idiopathic blood clots," meaning that doctors don't know why the clot occurred.

The distinction between a provoked and an unprovoked clot is not always black-and-white. For example, if you have a clot several months after a major surgery, it may not be obvious whether the surgery led to the clot or not. Current treatment guidelines specify that a clot is considered to be provoked if it occurs within three months after a major transient risk factor, or two months after a minor one.

### TREATMENT IMPLICATIONS

After any blood clot, whether it's provoked or unprovoked, blood thinners (anticoagulants) are generally prescribed for a minimum of three months. If blood thinners are stopped sooner, there's a risk that the clot will form again in the same place where it first occurred.

After three months, the treatment plan can vary. Some patients stop taking blood thinners, while others continue to take them over the long term. This decision is based on the risk of the patient having another clot versus the risk of bleeding caused by being on a blood thinner.

In general, an unprovoked clot is considered to be riskier than a provoked clot. Since unprovoked clots occur without any known precipitating factors, they could indicate an underlying tendency to form clots. Research has shown that patients with unprovoked clots have a high risk of having another clot in the future. Because of this, these patients are likely to be prescribed blood thinners for the long term to reduce their risk.

While unprovoked clots are considered to be riskier in general, clots that are provoked by a persistent (or long-term) risk factor are the riskiest of all, resulting in a very high risk of having another clot. For example, a patient with cancer who experiences a clot would usually be given long-term blood thinners, at least until their cancer goes into remission.



### HOW DOES SITTING CAUSE HARM?

Sitting raises the risk of clots in both the veins and the arteries. A clot in a vein usually occurs in the lower legs (known as deep vein thrombosis or DVT), but can travel to the lungs and cause a life-threatening pulmonary embolism (PE). A clot in an artery can block the blood flow to an organ, leading to very serious health issues like heart attack or a stroke.

When you're sedentary, blood flow slows down. Blood tends to pool, especially in the veins, and veins rely on the movements of surrounding muscles to push blood through. Stagnant blood has a strong

tendency to clot. The longer you spend without moving, the greater the chance that a clot will form.

Physical inactivity can also contribute to the buildup of fat deposits in the blood vessel walls. These fatty deposits can increase the risk of heart attack and stroke.

Weight gain may also help to explain the association between sitting and health risks, and some experts believe that this is the main driver of the link. People who are physically inactive have a much higher risk of being overweight or obese, which in turn raises the risk for several health problems. The

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### HOW TO REDUCE YOUR RISK



#### PRIORITIZE EXERCISE

Some studies have found that 60 to 75 minutes of moderate

physical activity (such as brisk walking) per day neutralizes the risk created by too much sitting. Try to commit to getting this much exercise every day to protect your health. You can choose to do a single longer exercise session, or to break it up into multiple shorter periods. If 60 to 75 minutes seems unattainable right now, start smaller – for example, commit to 20 minutes per day. You can slowly work your way up over time.



#### CONSIDER A SIT/STAND DESK

If your job involves a lot of time at a desk, then you may benefit

from changing your position while working. Standing desks allow you to stand up while working, rather than sitting. Some studies have found that long periods of standing can actually cause health problems too, so the healthiest option is a sit/stand desk, which moves up and down to allow you to shift between positions throughout the day. Moving frequently between sitting and standing is likely to be more beneficial than doing either one exclusively.



#### WHEN MOVING MAY BE DIFFICULT, WEAR COMPRESSION STOCKINGS

Stockings need to cover both the foot and lower leg to be effective; a sleeve that only covers your calf can actually trap even more blood in your foot. Compression stockings may be helpful when flying, or during periods of time where you may be unable to move around very much (such as after a surgical procedure). Studies have shown that compression stockings do have benefits, but they're not a complete substitute for getting up frequently. They may be helpful in situations where you know that you may not get up as often as you should.



#### REDUCE THE LENGTH OF TIME THAT YOU SIT WITHOUT MOVING

The more often you get up and move around, the better. Even if you just get up and grab a glass of water or go to the bathroom, breaking up a period of sitting with a bit of movement will be helpful. For example, if you watch two episodes of a show back-to-back, get up and walk around a bit in between them.



#### EXERCISING WHILE WORKING

You can get a small treadmill or stationary cycle that fits under your desk, which you can use while working at the computer. These devices may



By contrast, a provoked clot that's caused by a transient risk factor is less likely to be a long-term concern. For example, if a patient has a knee replacement and experiences a clot, the major surgery is a clear trigger. Once they've recovered from the surgery, their chances of a clot go down dramatically. This patient would likely be given blood thinners for three months after the clot, but not after that.

### PERSONALIZING CARE

Beyond general treatment guidelines, there are some individual factors that can influence whether or not a particular patient gets long-term blood thinners. Even for a patient with a provoked clot, long-term blood thinners may still be preferred in some cases.

Although certain risk factors classify a clot as "provoked," other contributors – such as a strong family history of blood clots, obesity, or certain chronic diseases (like kidney disease) – may increase the risk of a future blood clot. Having one or more of these factors may tip the balance towards taking long-term blood thinners, even in a patient with a provoked clot.

Imagine that you had a clot provoked by a major surgery. This is a transient risk factor, which would normally warrant taking blood thinners for only three months. However, if you were overweight or had other risk factors, for example, it might be worthwhile for you to take blood thinners for longer than three months to reduce the risk of future clots.

The location of a clot is also important. Blood clots in the lower legs are more common and less concerning than clots in other parts of the body. Studies have shown that people with a single unprovoked clot in the lower leg may not need long-term blood thinners, while those with a clot in another area (such as the thigh or arm) should be given blood thinners for a longer duration.

Another consideration is the risk of a fall. If a patient has a higher-than-average risk of falls, then they may be at increased risk of bleeding from taking blood thinners. This bleeding risk may be greater than the risk of another clot, so they may not be put on long-term blood thinners.

There's no one-size-fits-all solution for taking blood thinners after a clot. Instead, doctors will carefully weigh each patient's risk factors for a future blood clot and determine whether the increased risk

of bleeding caused by blood thinners would be outweighed by the decreased risk of another clot.

If you've experienced a blood clot, then your medical team will evaluate you to determine your risk of future clots. They might recommend that you take blood thinners for a few months, or they may advise you to take them for longer. This decision is highly individualized. If you have any questions about why particular recommendations were made in your case, don't hesitate to ask your medical team to explain this to you. ■

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AHA Journals: [A Patient's Guide to Recovery After Deep Vein Thrombosis or Pulmonary Embolism](#)

National Library of Medicine: [Treatment of distal deep vein thrombosis](#)

Journal of Thrombosis and Haemostasis: [Categorization of patients as having provoked or unprovoked venous thromboembolism: guidance from the SSC of ISTH](#)

National Library of Medicine: [Epidemiology and Risk Factors for Venous Thrombosis](#)



**WORLD THROMBOSIS DAY**  
**13 OCTOBER**

October 13 is World Thrombosis Day (WTD)! WTD places a global spotlight on thrombosis as an urgent and growing health problem. Learn more at [worldthrombosisday.org](http://worldthrombosisday.org).



## Upcoming Patient Events

### Support Group for Newly Diagnosed Patients

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



We're pleased to offer a virtual support group experience specifically for patients who've recently had a blood clot.\* All meetings start at 7:00 PM EST.

**October 20, 2022**  
**November 17, 2022**  
**December 15, 2022**

\*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!

**October 18, 2022**  
**November 15, 2022**  
**December 6, 2022**

All meetings begin at 7:00 PM EST.

To register for these programs, please visit [Patient Events](#) on our website or email [events@thrombosis.org](mailto:events@thrombosis.org).



### IS SITTING THE NEW SMOKING?

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accumulation of excess fat tissue, particularly in the organs, causes chronic inflammation throughout the body, raising the risk of cancer and other diseases.

### COMPARING SMOKING WITH SITTING

It's important to point out that while sitting and smoking are both risky for your health, smoking is significantly more dangerous. The dangers of smoking should not be minimized. Smoking dramatically increases your risk for both blood clots and many other serious health problems.

A 2018 paper looked at the risks of both smoking and sitting and found that sitting increases the risk of death by 22%, while smoking increases it by 180% – meaning that smoking nearly triples the risk of death. For heavy smokers (two packs a day), the risk of death is more than five times higher than for a nonsmoker.

The truth is that sitting and smoking are not equivalent behaviors – smoking is worse for your health, although sitting is bad too. If you smoke and are sedentary, quitting smoking may have greater benefits to your health – but becoming more physically active is also important, and the benefits of this should not be minimized.

That's what the phrase "sitting is the new smoking" means. It aims to highlight a health threat that many people are unaware of, and to convince at least a few of them to sit less. The more movement you can build into your day, the lower your risk of health issues – including blood clots. ■

### References

Annals of Internal Medicine: [Sedentary Time and Its Association With Risk for Disease Incidence, Mortality, and Hospitalization in Adults](#)

The Lancet: [Does physical activity attenuate, or even eliminate, the detrimental association of sitting time with mortality? A harmonised meta-analysis of data from more than 1 million men and women](#)

National Library of Medicine: [Effects of compression stockings on lower-limb venous and arterial system responses to prolonged sitting: A randomized cross-over trial](#)

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