

What is intermittent pneumatic compression?

Intermittent pneumatic compression (IPC) is a treatment that uses an air pump and inflatable leggings to provide pulsing pressure that pushes blood through the veins. IPC keeps blood moving through the legs and back to the heart, preventing blood from standing still (when clots are more likely to form).

IPC is used to prevent blood clots in the leg veins ([deep vein thrombosis](#) , or DVT) in women who are not able to walk, usually after surgery or in the hospital. IPC can also be used to relieve the symptoms of [chronic vein disease](#) and prevent skin ulcers (sores) or help them heal.

IPC devices are also called *sequential compression devices*, or SCDs.

How is IPC used to treat vein disease?

IPC can prevent DVT in women who are at risk for blood clots in the leg veins because they are unable to walk, such as after surgery or during a long hospital stay. IPC can also improve blood flow and relieve symptoms in women with severe chronic vein disease.

The most common use of IPC is prevention of blood clots after surgery. IPC reduces the risk of DVT after surgery by as much as 60%.¹ When deciding what steps to take to prevent DVT, doctors will take into account your overall blood clot risk as well as the risks of your specific procedure. Many patients will receive IPC in addition to

[drugs to prevent clots](#)

to prevent clots. Certain surgeries, such as knee and hip surgery, carry an especially high risk of blood clots, and women undergoing these procedures may benefit from IPC.

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Women who are at high risk for clots because of other conditions (see

[Am I at Risk for DVT](#)

) may benefit from IPC after other types of surgery or during long hospital stays.

IPC is also a useful tool to prevent blood clots after surgery in women who cannot take blood-thinning medications because of the risk of excess bleeding.^{2,3} This may be because they have blood-clotting problems, or because they had a type of surgery that makes bleeding particularly dangerous, such as eye, brain, or spine surgery.

Women with severe chronic vein disease may also be treated with IPC to improve blood flow in the leg veins. For these women, IPC in the hospital or at home can relieve pain and swelling and help heal or prevent ulcers (sores) on the legs. IPC is usually used to treat chronic vein disease only after other treatments, such as [compression stockings](#), have failed to control symptoms.

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How does IPC compare with other treatments to prevent blood clots?

Most women at high risk for blood clots or who are undergoing risky surgeries will receive both blood-thinning drugs and IPC to prevent DVT. IPC and medication together is 84% more effective at preventing clots compared with medication alone.⁵ In women who cannot take blood thinners, IPC can prevent DVT without increasing the risk of dangerous bleeding.

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It is not clear whether IPC is better than compression stockings to prevent blood clots, or if the two treatments should be used together.⁶ In one analysis of 10 trials comparing IPC with compression stockings, IPC was slightly more effective overall (a 3% risk of DVT compared with a 6% risk with stockings), but this difference was too small to conclude that one treatment was better than the other.

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If you are having surgery or are immobilized in the hospital, talk to your healthcare provider about your blood clot risk and what steps are being taken to prevent a DVT. Depending on your other conditions and the nature of your procedure or illness, your DVT prevention plan may include [medication](#), IPC, and [compression stockings](#), in addition to getting up and moving as soon as possible. To learn more about steps you can take to prevent a DVT in high-risk situations, see [Preventing DVT: The Basics](#)

References

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