

Blood clot risk halved for patients checking their own Warfarin dose

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(Medical Xpress) -- Patients who monitor their own treatment with warfarin or other blood-thinning drugs reduce their risk of developing blood clots by half, an Oxford University study has found.

Taking charge of their own treatment can empower patients, improve the

quality of treatment and be more convenient. The researchers say their findings confirm that self-monitoring of warfarin is safe for suitable patients of all ages.

The results are published in the [medical journal](#) *The Lancet*.

"Warfarin is used for a number of conditions to prevent the blood clotting," explains Dr. Carl Heneghan, who led the work at the Department of [Primary Health Care](#) at Oxford University. "These conditions include atrial fibrillation, treatment of deep-vein [thrombosis](#) and patients with [artificial heart](#) valves."

In the UK, it is thought that around 1 million people are eligible for blood-thinning drugs, or anticoagulants, with demand set to rise further due to the [ageing population](#).

But the use of [anticoagulants](#) needs regular monitoring to make sure the dose remains within the right range.

"If the dose is too high then individuals can be at substantial risk of a major bleed, whereas if it is too low they run the risk of having a blood clot," says Dr. Heneghan.

The right dose is affected by a number of factors that make safe and effective management of anticoagulation challenging. For example, increasing age, medications, vitamins, alcohol, diet, and changes in lifestyle can all affect the dose that should be used.

"Management of oral anticoagulation treatment is often done badly," says Dr. Heneghan. Up to 40% of cases can be outside the correct dosing level. "But it is possible to empower patients not only to self-measure but also to self-adjust their therapy."

Patients use a simple test, much like a blood glucose meter for diabetics, to 'self-monitor' their treatment. Some patients also then 'self-adjust' their dose as appropriate, while others may see their doctor at this point.

The Oxford team looked at the evidence for any benefits of self-monitoring by pooling individual patient data from 11 previous randomised trials involving over 6,400 patients.

The researchers found that self-monitoring reduced by 49% the risk of [blood clots](#) – events including [deep vein thrombosis](#), stroke, or a heart attack – compared with usual care. There was no difference in the number of major bleeds or deaths.

"A wide range of ages was included in the analysis. The youngest was 17 and the oldest was 94 years of age. Across all these ages self-monitoring proved to be a safe intervention," says Dr. Heneghan.

The group's results show that patients with artificial heart valves and younger patients benefitted the most. "For these two groups we would now expect widespread use of self-monitoring," says Dr. Heneghan.

For people with artificial heart valves who monitored their own treatment, the risk of blood clots was halved. For every 1000 patients monitoring their [warfarin](#) therapy for 5 years, 42 such 'thromboembolic events' would be prevented with no extra risk of bleeding.

The risk was reduced by two-thirds for patients under 55 years old, with 48 thromboembolic events prevented per 1000 patients.

Dr. Heneghan does say that: "Patients vary considerably in their ability to self-monitor. Some are very capable of both self-testing and self-management, whereas others are either unable or unwilling to do either. The challenge then is to identify which individuals are suitable for self-

monitoring of oral anticoagulation therapy, and to provide sufficient training to ensure that they can do so safely and effectively."

"The concept of self-care and self-monitoring is a growing part of health care," adds Dr. Heneghan. "It is recognized in many chronic conditions as an important part of the overall management strategy. For instance, it use widely in diabetes, asthma and hypertension management."

He notes that managing chronic disease is an important and costly element of [health care](#) which accounts for about 80% of GP consultations.

Provided by Oxford University

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