New approach prevents thrombosis without increasing the risk of bleeding
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In collaboration with an international team, researchers at Karolinska Institutet in Sweden have developed an antibody, 3F7, which blocks a protein that is active in the coagulation system factor XII. Inhibition of factor XII makes it possible to prevent thrombosis in blood vessels without increasing the risk of bleeding in clinical settings.

In the study, thrombosis in rabbits on ECMO...
receiving 3F7 decreased was as low as rabbits receiving heparin, but the risk of bleeding with 3F7 was minimal, whereas heparin-treatment led to bleeding.

"Blocking F XII appears to be an effective strategy against thrombus formation, and we have shown this in experiments on rabbits in a clinically relevant context", says Thomas Renné. "There is a great need for a treatment that reduces the clot risk in emergency situations, such as during ECMO treatment and many others such as cardiovascular surgery. We plan to test the antibody in a phase I study. It is possible that the antibody also blocks inflammation mediated by F XII, an interesting area for future studies."

More information: 'A Factor XIIa Inhibitory Antibody Provides Thromboprotection in Extracorporeal Circulation Without Increasing Bleeding Risk', Magnus Larsson, Veronika Rayzman, Msarc W. Nolte, Katrin F. Nickel, Jenny Björkqvist, Anne Jämsä, Matthew P. Hardy, Marion Fries, Stefan Schmidbauer, Patricia Hedenqvist, Michael Broomé, Ingo Pragst, Gerhard Dickneite, Michael J. Wilson, Andrew D. Nash, Con Panousis and Thomas Renné, Science Translational Medicine, 5 February 2014 Vol 6 Issue 222 222ra17

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