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# Menopause and hormone therapy in the 21st century: why promote transdermal estradiol and progesterone?

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In their editorial,<sup>1</sup> Gersh and Lavie describe the many ways that estradiol impacts cardiovascular health. In addition, the authors rightly question the findings of the Women's Health Initiative among menopause women using hormone therapy. Importantly, they emphasise the need for using the most physiological human-identical transdermal estradiol combined with natural progesterone. However, no information is given on both the biological rationale and the expected benefits of transdermal oestrogens compared with oral oestrogens. Oral but not transdermal oestrogens result in a hepatic first-pass effect that may induce reversible prothrombotic changes in haemostatic variables,<sup>2</sup> including resistance to activated protein C (figure 1). Thrombotic

process plays a critical role in the development of both venous and arterial diseases. European studies have clearly shown the advantage of transdermal oestrogens with respect to the risk of venous thromboembolism<sup>3</sup> and probably also stroke. The type of progestogens has also emerged as an important determinant of thrombosis. Progesterone has no effect on blood coagulation,<sup>2</sup> and it is the safest progestogen with respect to thrombosis.<sup>4</sup> Since thrombosis is one main serious adverse effect of hormone therapy, women should be encouraged to use transdermal oestrogens combined with progesterone.

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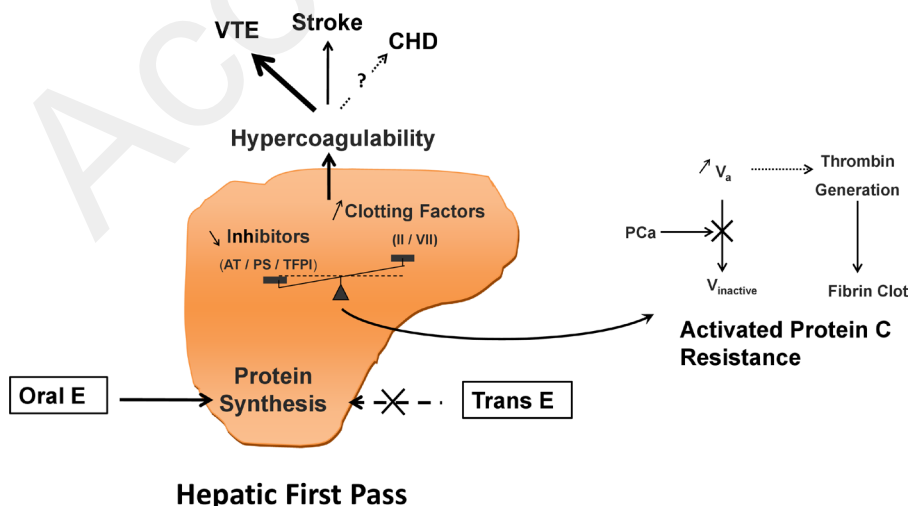


Figure 1 Caption.