



## Menopausal Treatments and the Risk of Blood Clots

Hormone therapy/ Hormone Replacement Therapy (HT /HRT) containing oestrogens in tablet form and also selective oestrogen receptor modulators (See the Role of SERMs Post Menopause) increase the risk of deep vein thrombosis (DVT). DVT means a clot has formed in the deeply situated veins in the leg. Sometimes the clot can travel through the system of veins and lodge in the lungs when it is called a pulmonary embolus. This can be fatal. The thrombotic (*increased risk of developing clots*) effects of oestrogen are associated with a slightly increased risk of stroke.

### What causes the increased Risk?

Oestrogens increase clotting factors in the blood as well as reducing the body's natural anticlotting agents.

*The risk of a thrombotic event is greater within the first two years of starting treatment, however the increase risk persists throughout the time of taking HT/HRT.*

### How Big is the Risk?

- In most women who do not take HT/HRT, the risk of thrombosis is small.
- Taking HT/HRT will increase this normal of "baseline" risk two to three times (a "relative risk" increase) but a woman's overall or "absolute risk" will still be small. (See AMS pamphlet - Treating the Menopause- The Concept of Risk and Benefit)
- Some women may have a high baseline risk, including those who have had prior clotting events. *Other risk factors are an inherited predisposition to clotting, smoking, obesity and some autoimmune diseases. HT/HRT is another risk, which will increase this baseline risk further.*
- A woman's baseline risk also increases with age. *As a child, the risk of an event is 1:100,000, between ages 40 to 59 the incidence is of 50 cases per 100,000 people. Over 70 the rate increases to 200 per 100,000 people.* So this higher risk in older age will be increased two to three times by taking oestrogen tablets. The age-related increase in risk starts to increase dramatically at 60 years of age. *(In particular if the person is also overweight or is a smoker)*
- A common genetic abnormality, Factor V Leiden (FVL) mutation, which affects 4 to 6% of the population, significantly increases the risk of DVT. A woman with this mutation has 6 to 15 times increased relative risk. *By taking HT / HRT the risk rises further.*
- If a woman has had a DVT or pulmonary embolus in the past it does not necessarily mean she cannot take HT/HRT. *Her doctor will help weigh up the risks and benefits, with careful consideration to her age, weight, and if necessary, screening for genetic clotting abnormalities.*
- Times of special risk include travel, prolonged immobilization such as hospitalization, and certain forms of surgery. *(It is important to notify the surgeon if a woman is taking HT/HRT)*
- *It is not clear if taking aspirin has a protective effect on DVT risk among women taking oral hormone therapy.*
- *Aspirin may help, in particular people who are at higher risk (travel, overweight, after surgery) but lots of people have to take aspirin for one person to be helped. There is no clear evidence regarding what dose and for how long aspirin is to be taken to be effective.*



### How to minimise the risk

- Women with a personal history or a family history of thrombosis can be screened for risk factors. However routine screening for low risk women before starting HT/HRT is not considered necessary.
- Women who acquire temporary risk factors for clotting such as long distance travel, fracture of lower limbs, or any prolonged immobilization, may be advised to cease HT/ HRT in the short term (*the use of compression stockings is recommended*).
- The increased risk has been observed in studies where women were taking oral (tablets) hormone therapy. Emerging evidence suggests that using a non- oral preparation (eg a skin patch) may be less of a risk. However more research is needed prior to advocating the use of a patch in women at high risk of DVT.
- *There is also a suggestion that using a different type of progesterone would change the risk – more studies are needed to clarify the relevance of this assumption.*
- The risk of tibolone is uncertain
- It is advisable for any woman who experiences chest pain, shortness of breath, calf pain or swelling in one limb to seek prompt advice from a doctor.

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