

What is tPA and what is it used for?

Tissue plasminogen activator (tPA) is a clot-busting (*thrombolytic*) drug that dissolves blood clots to restore blood flow to a blocked artery. tPA is made naturally in the body by cells in the blood vessel walls. tPA is the first-choice treatment for patients in the initial stage of blocked-vessel (ischemic) stroke, and is the only drug approved by the FDA for this use. tPA is also used to treat heart attacks caused by clots.

Treatment with tPA restores blood flow and oxygen to the parts of the brain affected by a stroke, helping to prevent further damage. To be effective, tPA must be given within 3 hours at most of when stroke symptoms first appeared—this is why it is so important to seek help quickly if a stroke is suspected. Treatment with tPA speeds up recovery from a stroke and improves your chances of surviving without any major disabilities or long-term symptoms.

How well does tPA work?

tPA speeds your recovery from stroke and lowers the chances that you will have a permanent disability because of the stroke. It does not affect your chances of dying. In the initial study of tPA to treat stroke, among 333 patients (43% were women) those treated with tPA were 30% more likely to have minimal or no disability 3 months and 1 year after a stroke, compared with patients who received a placebo.¹ Despite the benefits of tPA, treatment is no guarantee of a good outcome. The chances of dying after a stroke are the same as with other treatments, and arteries that were opened with tPA may re-close soon after.

Women tend to have worse outcomes than men after a stroke and are more likely to be disabled as a result.² Perhaps because of this, the benefits of tPA treatment seem to be especially important for women. In an analysis of nearly 1000 women from three studies, women were more likely than men to benefit from tPA. In this study, 40% of women had good functional outcomes compared with 30% who received a placebo.³ Many other studies have also found that women receive a larger benefit from tPA treatment.

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Most, but not all,

²

studies indicate that tPA treatment erases the natural disadvantage women have in terms of the

chances of a good outcome after stroke.

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