

The PT and INR are used to monitor the effectiveness of the anticoagulant warfarin (COUMADIN®). This drug affects the function of the coagulation cascade and helps inhibit the formation of blood clots. It is prescribed on a long-term basis to people who have experienced recurrent inappropriate blood clotting. Common clinical indications for warfarin use are atrial fibrillation, the presence of artificial heart valves, deep venous thrombosis, and pulmonary embolism (where the embolized clots first form in veins). Warfarin is also used in antiphospholipid syndrome, and occasionally in heart attacks. The goal with warfarin therapy is to maintain a balance between preventing clots and causing excessive bleeding. This balance requires careful monitoring, typically by PT/INR.

When a person is taking the anticoagulant drug warfarin, the doctor will order periodic PT/INR tests to ensure that the prescription is working properly and that the PT/INR is appropriately prolonged. There is no set frequency for doing the test. A doctor will order them often enough to make sure that the drug is producing the desired effect - that it is increasing the person's clotting time to a therapeutic level without causing excessive bleeding or bruising.

The PT may be ordered when a person who is not taking anticoagulant drugs has signs or symptoms of a bleeding disorder, which can range from nosebleeds, bleeding gums, bruising, heavy menstrual periods, blood in the stool and/or urine to arthritic-type symptoms (damage from bleeding into joints), loss of vision, and chronic anemia.

PT, along with PTT, is routinely ordered when a person is to undergo an invasive medical procedure, such as surgery, to ensure normal clotting ability.

Most laboratories report PT results that have been adjusted to the INR for people on warfarin. These people should have an INR of 2.0 to 3.0 for basic "blood-thinning" needs. For some who have a high risk of clot formation, the INR needs to be higher - about 2.5 to 3.5. The doctor will use the INR to adjust a person's drug dosage to get the PT into the desired range that is right for the person and their condition.

The test result for a PT depends on the method used, with results measured in seconds and compared to the normal range established and maintained by the laboratory that performs the test. This normal range represents an average value of healthy people who live in that area and will vary somewhat from region to region and may vary over time. So someone who is not taking warfarin would compare their PT test result to the normal range provided with the test result.

A prolonged PT means that the blood is taking too long to form a clot. This may be caused by conditions such as liver disease, vitamin K deficiency, or a coagulation factor deficiency. The PT result is often interpreted with that of the PTT in determining what condition may be present.