

# Prothrombin Time/INR Testing with INRatio

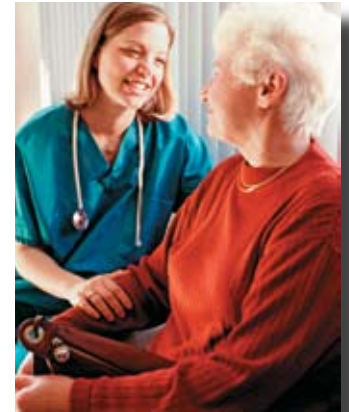
## Blood Clotting Disorders, Warfarin & the PT/INR Test

### What are Blood Clotting Disorders?<sup>1</sup>

The formation of a blood clot is a desirable and essential response to a wound, preventing a simple injury from becoming a potentially fatal bleeding event. However, blood clots can have unwanted effects when they block the normal blood flow in the body.

Examples of blood clotting disorders are:

- Mechanical Heart Valves
- Atrial Fibrillation
- Heart Attack
- Acute Ischemic Stroke
- Deep Vein Thrombosis
- Pulmonary Embolism



### What is Warfarin?<sup>2</sup>

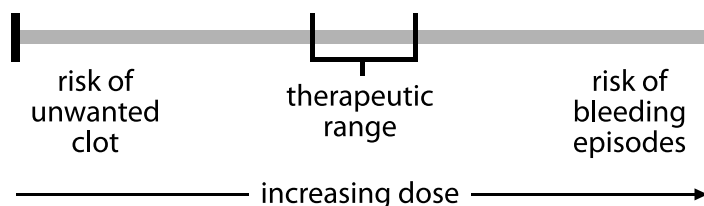
Warfarin is an Oral Anticoagulant, or blood thinning drug prescribed to patients to prevent potentially lethal blood clots. Coumadin® and Jantoven® are brand name examples of warfarin. Warfarin has been prescribed since the 1950s and is regarded as safe and effective when it is dosed correctly. It is the most widely prescribed oral anticoagulant besides aspirin.

### What is Prothrombin Time/INR?<sup>3</sup>

Prothrombin Time (PT) is an expression of the time it takes for blood to clot. PT results are reported as the number of seconds the blood takes to clot when mixed with a thromboplastin reagent. INR is the International Normalized Ratio, which expresses PT in a common scale established by the World Health Organization. The INR was created because PT results can vary depending on the thromboplastin reagent used. The INR is a conversion unit that takes into account the different sensitivities of thromboplastins.

### Why is PT/INR Testing Important?<sup>3</sup>

The safety and effectiveness of warfarin depends on maintaining the blood's ability to coagulate within a narrow therapeutic range, which can be challenging if not actively managed. If there is too much warfarin in the patient's bloodstream, there is a risk of hemorrhage, or uncontrolled internal or external bleeding, which can be fatal. If there is too little warfarin in the bloodstream, it will be ineffective in reducing the risks associated with blood clots from the underlying condition, such as a stroke or heart attack.



When the correct dosage has been achieved, the anticoagulation effect of the drug will be within a safe and effective therapeutic range. The effectiveness of warfarin can vary between patients and within the same patient, depending upon a number of factors. Changes in diet, alcohol, interaction with other drugs, a patient's overall health and environmental factors can all affect the degree of anticoagulation caused by warfarin. These factors make it important for patients on warfarin to measure their blood clotting ability frequently to provide their physicians with the information necessary to maintain an appropriate level of warfarin.

1. MedlinePlus® Bleeding Disorders, <http://www.nlm.nih.gov/medlineplus/print/bleedingdisorders.html>, accessed 11/8/07

2. MedlinePlus® Drug Information, <http://www.nlm.nih.gov/medlineplus/print/druginfo/medmastera682277.html>, accessed 11/8/07

3. Heart Rhythm Society™ Internal Normalized Ratio (INR), <http://www.hrspatients.org/patients/treatments/inr.asp>, accessed 11/8/07

## The INRatio PT/INR Monitoring System



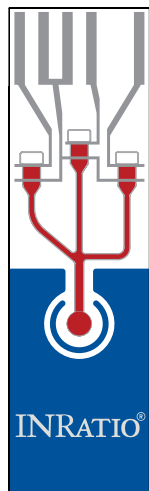
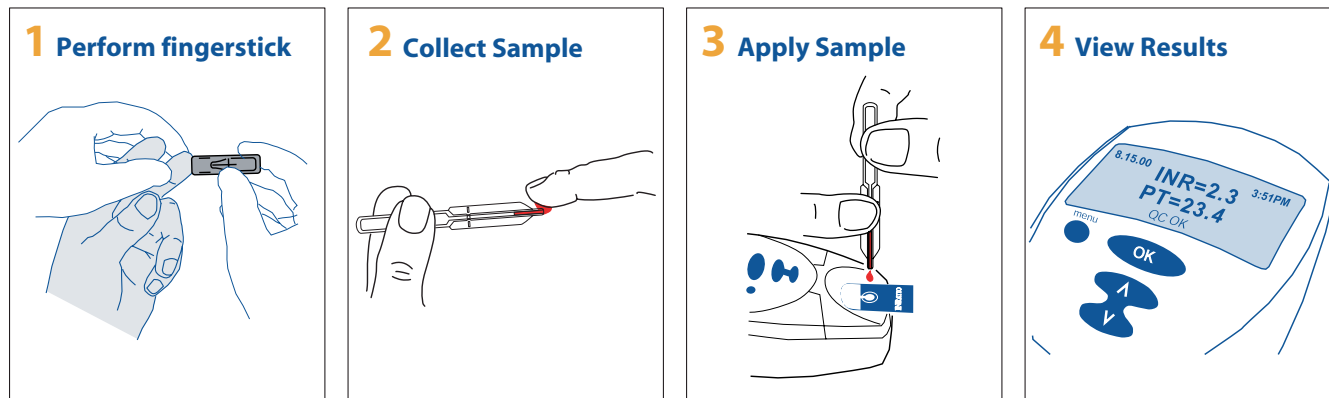
### Offering Immediate PT/INR Test Results

The INRatio PT Monitoring System consists of a small, portable monitor and disposable test strips and provides quick and accurate measurement of a patient's PT/INR value, allowing the healthcare professional to adjust warfarin dosage and suggest lifestyle changes with the patient face to face.

### INRatio Features

- Results in less than 2 minutes
- Easy fingerstick test procedure
- On Board 2 level Quality Control system
- Individually foil packaged test strips
- Small, 1 drop 15  $\mu$ L blood sample size
- Test strips do not require refrigeration
- CLIA waived
- FDA cleared for home use
- Easy to use interface
- Completely portable
- Uses 4 AA batteries or power supply
- Stores 60 test results

### Simple Test Procedure

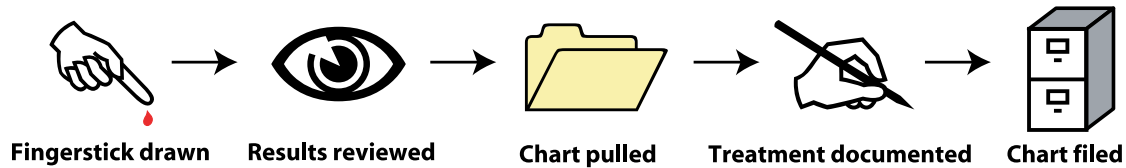


### 2 Level QC You Can See

The INRatio test strip divides the sample into 3 distinct channels and automatically performs a low normal and high therapeutic quality control test on every test. Quantitative results are displayed in seconds and can be recorded. No additional liquid or separate controls are required.

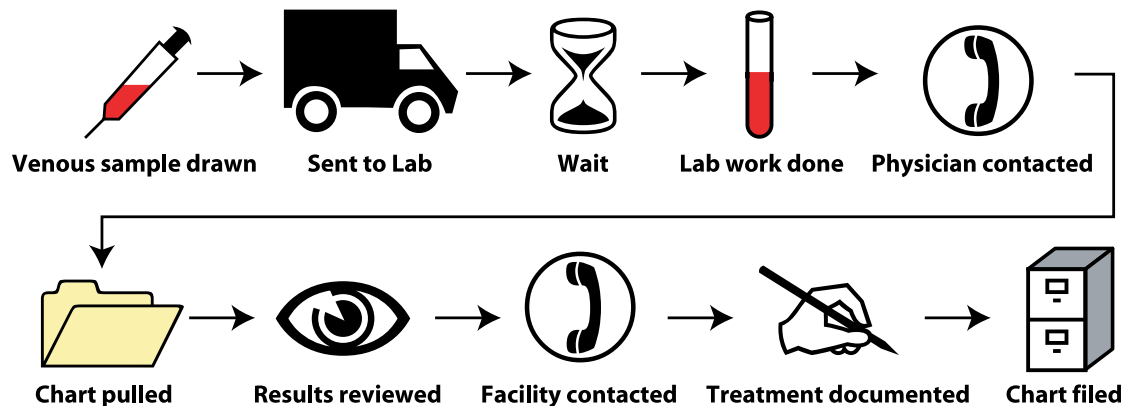
## Point-of-Care Testing Comparison

### Testing with INRatio...



- Test results in less than 2 minutes.
- Nurse can assess results and make dosage changes while at patient's location based on Physician's recommendation.
- Allows nurse to take immediate action on physician's instructions.
- Saves valuable time for both healthcare professional and patient.
- Staying within therapeutic range can reduce the risk of complications.

### ... vs Lab Testing



- Test results in approximately 24-48 hours.
- Feedback is delayed; by the time the nurse is contacted, their patient's PT/INR may have changed.
- Multiple phone calls may be needed to receive lab results.
- Requires administration time by staff to coordinate with the outside lab.



A Quick Glance at Benefits...

## Healthcare Professional Benefits

### Immediate PT/INR Results offer Patient Feedback

- Allows for face-to-face counseling and dosage change recommendations.
- Nurses can act immediately on physician instructions.

### Improved Staff Efficiency

- Helps eliminate time consuming staff call-backs to communicate patient's test results.
- CLIA-waived allows the PT/INR test to be done immediately at the patient's side.
- Test can be done without extra quality control tests, calibration, start up time or maintenance.
- Portable INRatio can be easily transported to different sites.

### Improved Cost Effectiveness

- Does not require the purchase of costly capital equipment.
- Reduce lab fees and transport expenses.

## Patient Benefits

### Immediate PT/INR Patient Feedback

- Allows for face-to-face counseling with Nurse.
- Nurses can receive immediate warfarin dosage adjustment instructions for patient.
- Test results that are out of therapeutic range can be acted upon immediately.

### Time Savings

- Nurse completes testing, gets results, and makes changes within a single visit.
- No waiting for follow up call for test results.
- INRatio produces test results in under 2 minutes

### Comfortable Test Method

- INRatio uses a simple fingerstick rather than a venous draw

### Less Travel

- Using INRatio may eliminate a trip to the lab for blood test.

**Contact us today for more information on PT/INR testing with INRatio.**

#### Order Information:

P-T100004Z INRatio Monitor Professional Kit  
P-T100139Z INRatio Test Strips 48/Box  
P-T0200235 Blood Collection Tubes 50/pk  
P-T200046 Printer  
MPHSAFETY21Z Medline Preferred Lancet 21g 200/Box



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