

Coumadin Monitoring

(An approved NC Division of Health Service Regulation Continuing Education Course)

What is Coumadin (Warfarin)

Short Answer: a blood-thinning drug

Better Answer: warfarin: an anticoagulant (Blood thinner)

used to prevent and treat a thrombus or embolus (blood clots)

What is Coumadin

Even Better Answer: warfarin (Also known under the brand name Coumadin) is an anticoagulant (blood thinner) medication that can be administered orally. It is used for the prophylaxis (prevention) of thrombosis and embolism (blood clots) in many disorders. Its activity has to be monitored by frequent blood testing for the international normalization ratio (INR)

Trick Question: What is Warfarin

Warfarin is the generic name of Coumadin (brand name).

Patients should not switch between warfarin and Coumadin because the body is so sensitive to small changes in this medication.

Patients who start on warfarin should stay on warfarin, patients who start on Coumadin should stay on Coumadin.

Be aware that Coumadin and warfarin represent the same medication and should not be taken together to prevent overdose.

What Does Coumadin Treat?

- Prevent Blood Clots
- Treat irregular heart beats
- Used following heart attacks
- Used following heart valve replacement

stops formation of substances in the body that cause clots

What are Clots?

- Also known as “thrombus” or “embolus”
- Cause pain, redness, swelling in the legs
- Can move to other parts of the body
 - *Lungs - Pulmonary embolism
 - *Brain - Stroke
 - *Heart - Heart attacks

Clots Continued

*Used for BOTH the TREATMENT and PREVENTION of Blood clots.

*Coumadin does NOT break up existing clots (just prevents from getting worse)

How Does Coumadin Work?

Coumadin blocks the formation of Vitamin-K dependent clotting factors in the liver.

Vitamin K is needed to make clotting factors that cause the blood to clot and prevent bleeding.

Vitamin K is found naturally in foods such as leafy, green vegetables, and certain vegetable oils.

Effects of Coumadin

*Full effect may take up to 72-96 hours

*Anticlotting effects of a single dose of Coumadin may last 2 - 5 days.

How is Coumadin Monitored

- *Blood is taken from finger or arm.
- *Blood test called a Prothrombin test or Protime (also known as “PT”)
- *It is reported as International Normalized Ratio (also known as “INR”)
- *INR measures how long it takes blood to clot.

Coumadin Monitoring Continued

*Normal INR = 1

*For a patient with an INR of 2.5, it takes longer for their blood to clot than a normal person.

*The INR is used to help determine if the dose of Coumadin needs to be adjusted.

INR Therapeutic Range

DVT/PE prevent/treat	-	2-3
Atrial Fibrillation (Afib)	-	2-3
Biprost Valve	-	-
2-3		
Mechanical Heart Valve	-	
2.5-3.5		
PTCA (Coronary Angioplasty)	-	
2.1-4.8		
DVT/MI		

Factors Affecting INR

***Sickness**

***Diet**

***Other medications (prescription & OTC)**

***Physical activities**

How Should Coumadin Be Used?

- *Available as a tablet to take by mouth
- *Usually taken once a day
- *Doesn't make patients feel any different.
- *Interacts with many different foods and medications.
- *Most Concerning side effect: **Bleeding (or Bruising)**

Drug Interactions with Coumadin

****Almost any drug can interact with Coumadin****

****Include both prescriptions and non-prescription medications, including herbal medications & vitamins***

****Interactions can go “both ways” - make Coumadin work less or make Coumadin work more***

Coumadin Interactions Continued

*Classes of Drugs to be especially concerned about:

Other heart medications	Cancer medications
Acetaminophen (Tylenol)	Depression medications
Antibiotics	Diabetes
medications	
Aspirin	
Digestive problem medications	
NSAID's	Gout
medications	
Vitamins	High
Cholesterol medications	
Epilepsy medications	Thyroid medications

Coumadin Interactions Continued

Herbal medications to especially concerned about:

Coenzyme Q10

Danshen

Dong quai

Garlic

Ginkgo Biloba

St. John's wort

Food Interactions with Coumadin

- *Biggest thing to remember is to keep diet constant.
- *No need to avoid foods with a lot of Vitamin K, but keep the diet constant.
- *Some foods that are important to a healthy diet are high in Vitamin K, like green vegetables, some beans, & peas

Food Interactions Continued

Foods high in Vitamin K include:

- *liver
- *broccoli
- *kale
- *mustard greens
- *parsley
- *seaweed
- *collard greens
- *endive
- *green tea
- *cabbage
- *cabbage
- *cauliflower
- *green leafy vegetables
- *brussel sprouts
- *canola oil
- *soybeans/soybean oil
- *spinach
- *tofu
- *turnip greens

Food Interactions Continued

Avoid foods containing fat substitutes, such as Olestra (Olean) are supplemented with fat-soluble vitamins, including Vitamin K.

Example of these foods: fat-free potato chips

Coumadin and Alcohol

Alcohol SHOULD be avoided while on Coumadin

Side Effects of Coumadin

Most Common: Bruising

Other Common:

- *Headache

- *Upset stomach

- *Fever

- *Skin Rash

Side Effects Continued

Serious Side Effects:

- *bleeding

- *skin tissue necrosis (death of skin tissue)

- *hepatitis

- *hypersensitivity reaction

Coumadin Dosing

**The dosage of Coumadin/Warfarin must be individualized for each patient according to the patient's INR response to the drug.

** Adjust the dose based on the patient's INR and the condition being treated.

Coumadin/Warfarin Dosing

Coumadin/Warfarin is available in multiple strengths in order to individualize dose.

Available doses:

	1mg	5mg
		2mg
6mg		2.5mg
7.5mg		
	3mg	10mg
		4mg