Anticoagulants

**Immediate Symptoms*\**

**Mild to moderate:**
- Prolonged INR or average prothrombin time above 1.5
- Epistaxis
- Petechia
- Lethargy
- Weakness
- Pallor

**Severe:**
- Hematuria
- Refractory epistaxis
- Ecchymosis
- Hemoptysis
- Melena
- Hematemesis

(Immediate Symptoms continued...)

**Life threatening**
- Severe organ hemorrhage
- Shock

*Onset of symptoms may not appear immediately after dosage

**Ongoing Symptoms**

Overexposure is initially asymptomatic and may remain that way even as prothrombin times increase.

Anticoagulants exert their effect after a latent period of 12 to 24 hours, and their effect lasts for two to five days.

**Examples**

**Chemical Warfare Agents**
- None currently listed

**Toxic Industrial Chemicals/Toxic Industrial Materials**
- Coumadin
- Superwarfarins
  - Brodifacoum
  - Bromodialone
  - Diphacinone

**Common Treatment Protocols**

- Prolonged clinical and analytical follow-up
- Close monitoring using prothrombin time (PT) and plasma thromboplastin time (PTT)
- Fresh frozen plasma or whole blood, along with Factor VII therapy, for acute bleeding
- Close clinical observation for occult bleeding or life-threatening hemorrhage
- Vitamin K1 if large ingestion is suspected

**Sensitive Populations**

- No particularly sensitive populations

**Concerns About This Syndrome**

Effects with minimal presentation immediately after exposure decreases the likelihood of mass casualty response.

The anticoagulants inhibit vitamin K epoxide reductase, thus blocking the reuse of vitamin K and rapidly depleting the liver of its active vitamin K stores.

For non-vitamin K dependent treatment of toxicity is more difficult than traditional anticoagulants, but involve the administration of blood products including FFP (fresh frozen plasma).