

The seal of the San Diego County Medical Examiner's Office is a large, ornate, five-pointed star. It features a central circular emblem with a figure holding a staff and a bowl, surrounded by various symbols of medicine and law. The text "SAN DIEGO COUNTY" is arched across the top, and "MEDICAL EXAMINER'S OFFICE" is arched across the bottom. The star is filled with intricate patterns and smaller symbols.

# Handing-off a Patient to the Medical Examiner's Office: Details Are Important

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San Diego County Medical Examiner's Office

# Overview

- Review of deaths that the ME sees
- Important information from the death scene
  - Postmortem changes
  - Location/Position of the body
  - The scene itself
  - Deaths temporally associated with altercation/restraint
- Description of wounds
  - Sharp force injuries
  - Gunshot wounds



# The ME's Office: Charge, Mission, Jurisdiction

- The Medical Examiner is required to investigate and determine the circumstance, cause and manner of death per Section 102850 of the CA Health and Safety Code, and Section 27491 of the CA Government Code.



# The ME's Office: Sec. 102850 CA HSC

- “A physician, funeral director, or other person shall immediately notify the Medical Examiner when she/he has knowledge of a death which occurred or has charge of a body in which death occurred:
  - without medical attendance
  - during the continued absence of physician (not within 20 days of death).
  - Where the physician is unable to state the cause of death



## **Sec. 102850 CA HSC (continued)**

- Where suicide is suspected
- following an injury or an accident; or
- under such circumstances as to afford reasonable ground to suspect that the death was caused by the criminal act of another.



# Section 27491 CA Gov. Code

- Deaths known/suspected as due to a contagious disease, constituting a public hazard.
- Deaths from occupational diseases or hazards.
- Deaths in State Mental Hospitals.
- Deaths [suspected to have been caused by] the criminal act of another.
- Any death reported by physicians or other persons having knowledge of a death for inquiry by the ME.



# The ME's Office: Charge, Mission, Jurisdiction

- That is to say:
  - All violent, sudden, unusual, and unattended deaths.
  - Suspected suicide, accident, homicide
  - Any death of public health concern
  - Others



# San Diego County

- 3.3 million people
- 4,300 square miles
- Yearly:
  - Approximately 22,000 deaths
  - 11,000 referred to M.E.
  - 8,000 determined to be NOT within jurisdiction
  - 3,000 investigated
  - 2,250 autopsied





# Manner of Death Breakdown (Deaths Examined at MEO)

- 47% Accident
- 34% Natural
- 14% Suicide
- 3% Homicide
- 2% Undetermined

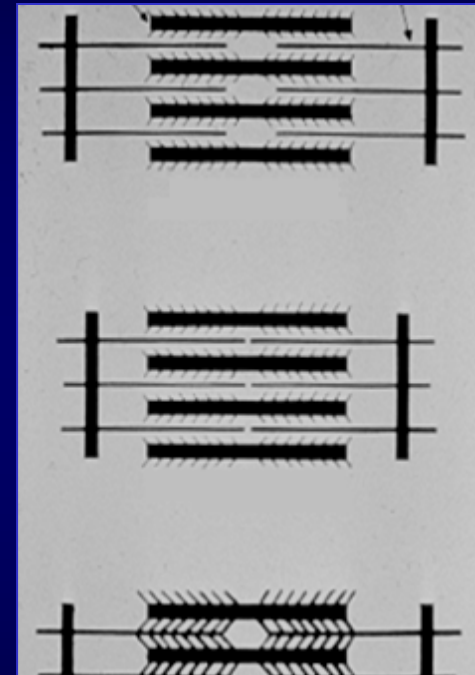


# Details From the Death Scene

- Postmortem changes



# Rigor mortis



Normal Postmortem Changes

# Early changes: livor mortis

- Livor mortis = postmortem lividity = hypostasis
- Reddish-purple discoloration of dependent portions of body
- Due to gravity - pooling/settling of blood in capillaries and then tissue



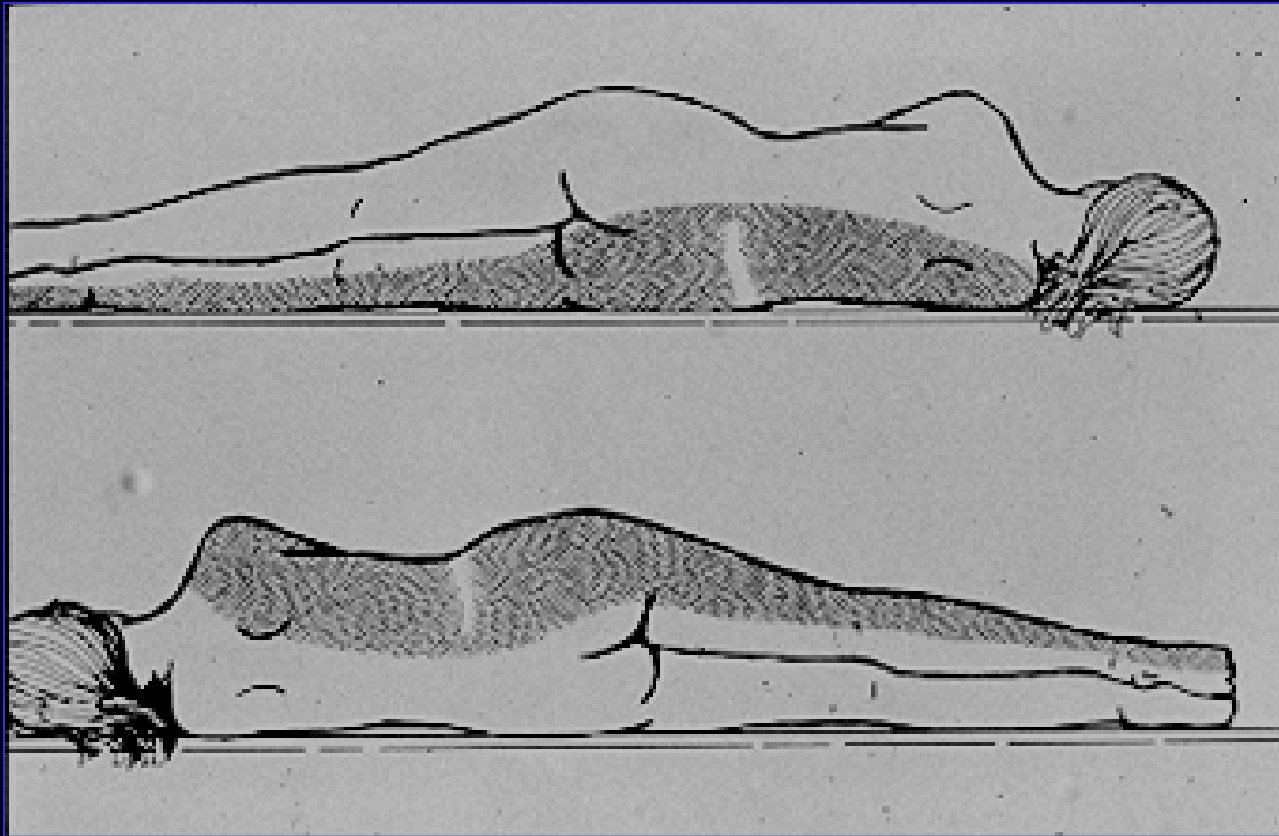
# Livor Mortis

- Usually perceptible within 1-2 hrs
- Maximizes in 8-12 hrs
- Pressure points
- May shift
- Becomes “fixed”
- Variables:
  - Blood loss, anemia,
  - skin color, body position



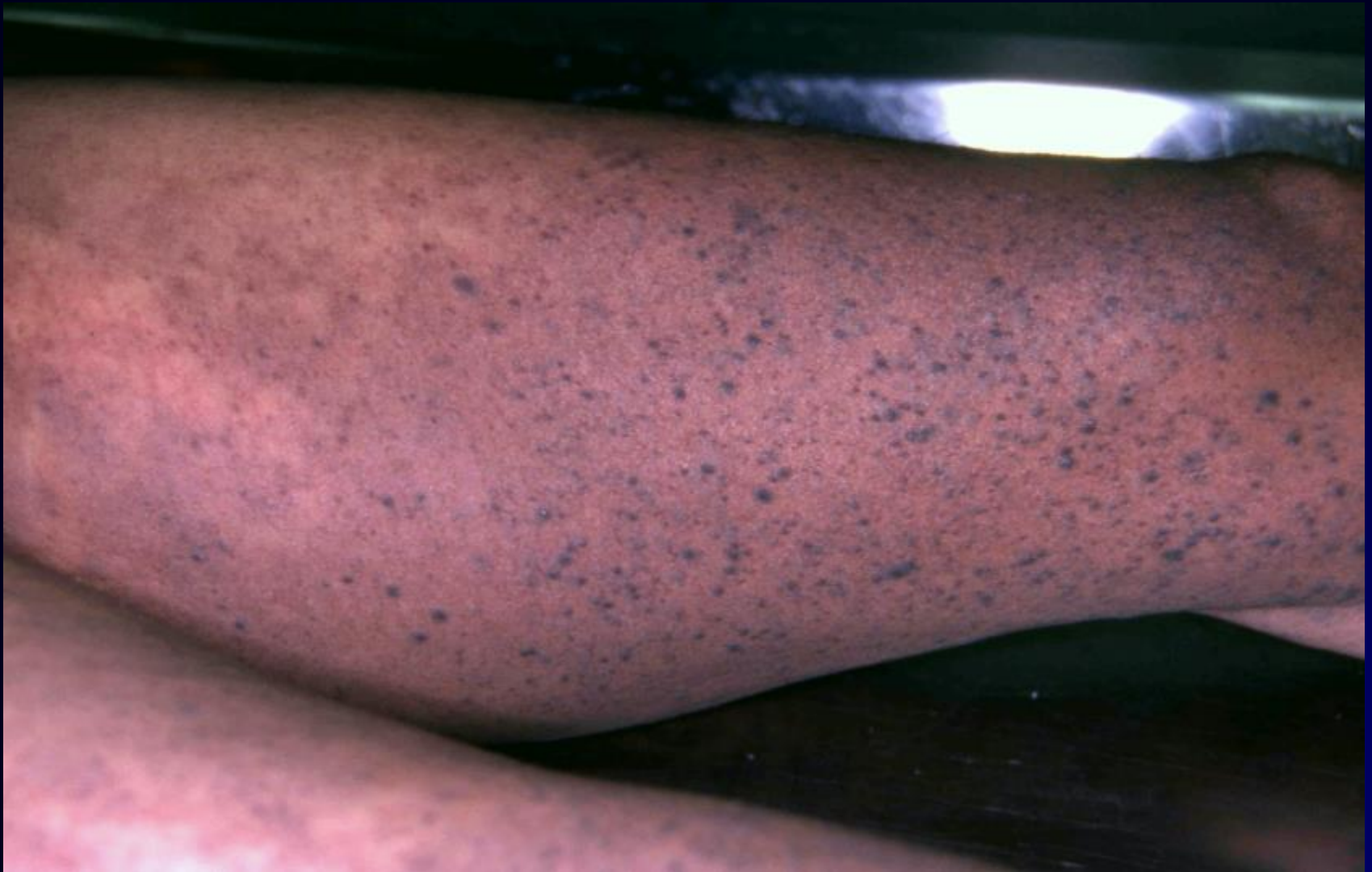
# Normal Postmortem Changes

## Lividity



# Tardieu spots

Pressure of settling blood can rupture small vessels



# Postmortem Changes: Importance

- Woman with migraines, “snowed” with prescription, so husband went to get acetaminophen
- Gone for less than an hour
- Returned, wife dead in bed, shot, house “ransacked”
- Medics documented lividity and rigor



# Postmortem ant activity



Ant activity



# Details From the Death Scene

- Postmortem changes
- Location/position of the body





# Details From the Death Scene

- Postmortem changes
- Location/position of the body
- The scene itself

# Items near the body

- Teenager on floor



# Illicit Drug Paraphernalia







Where were the bottles?  
Near the body?

# Evidence of Suicide?



# The Death Scene Itself



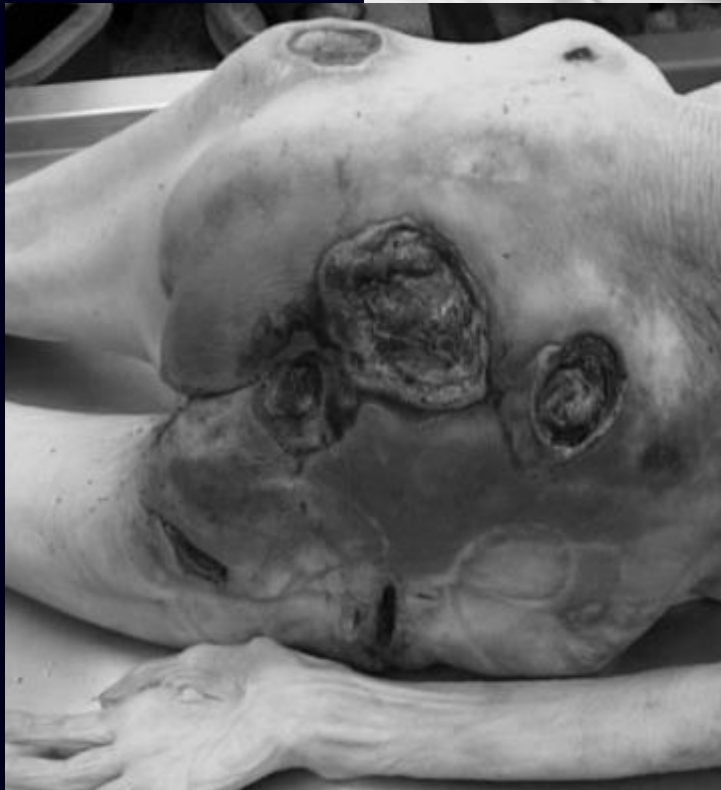
- Scene:  
cleanliness/hygiene  
issues, clothing, bedding



# Other Signs of Elder Abuse

- Poor hygiene
- Long nails
- Matted hair
- Carious teeth





# Issues with Evaluating Abuse

- Can natural causes for condition be ruled out?
  - Starvation vs. malabsorption, diabetes
  - Decubitus ulcers are a common consequence of incapacitation from natural disease with ischemia
- Hygiene and ulcers sometimes exaggerated
- Is there a direct connection between the abuse and the death?
- What is “reasonable” care?



# Details From the Death Scene

- Postmortem changes
- Location/Position of the body
- The scene itself
- Deaths temporally associated with altercation/restraint



# Deaths Temporally Associated with Altercation/Restraint

- Controversial
- Deaths might be due to drugs, natural disease, trauma or asphyxiation, or some combination
- Detailed evaluation (by the ME) of timing of unresponsiveness and activities is required





# Excited Delirium Syndrome

- AKA “In-Custody Death Syndrome”
- Excited delirium – psychotic behavior (by disease or drugs), confused, agitated/violent, irrational, sweating/hyperthermic.
- Struggle – violent, prolonged
- Other variables: baton/flashlight, OC, CED, obese, neck hold, position.



# Excited Delirium Syndrome

- Restraint – manpower, handcuffs, ankle cuffs, hobble restraint.



# Excited Delirium Syndrome



- Decedent becomes unresponsive after the activity.
- Autopsy often shows only minor injuries and no anatomic cause of death.



# Excited Delirium Syndrome

- Apparent *mechanism* of death
  - Arrhythmia caused by:
    - Increase in circulating catecholamines (epinephrine and norepinephrine), and/or by
    - Change in potassium (up then down), caused by
    - natural release and drug induced release, and by exercise.

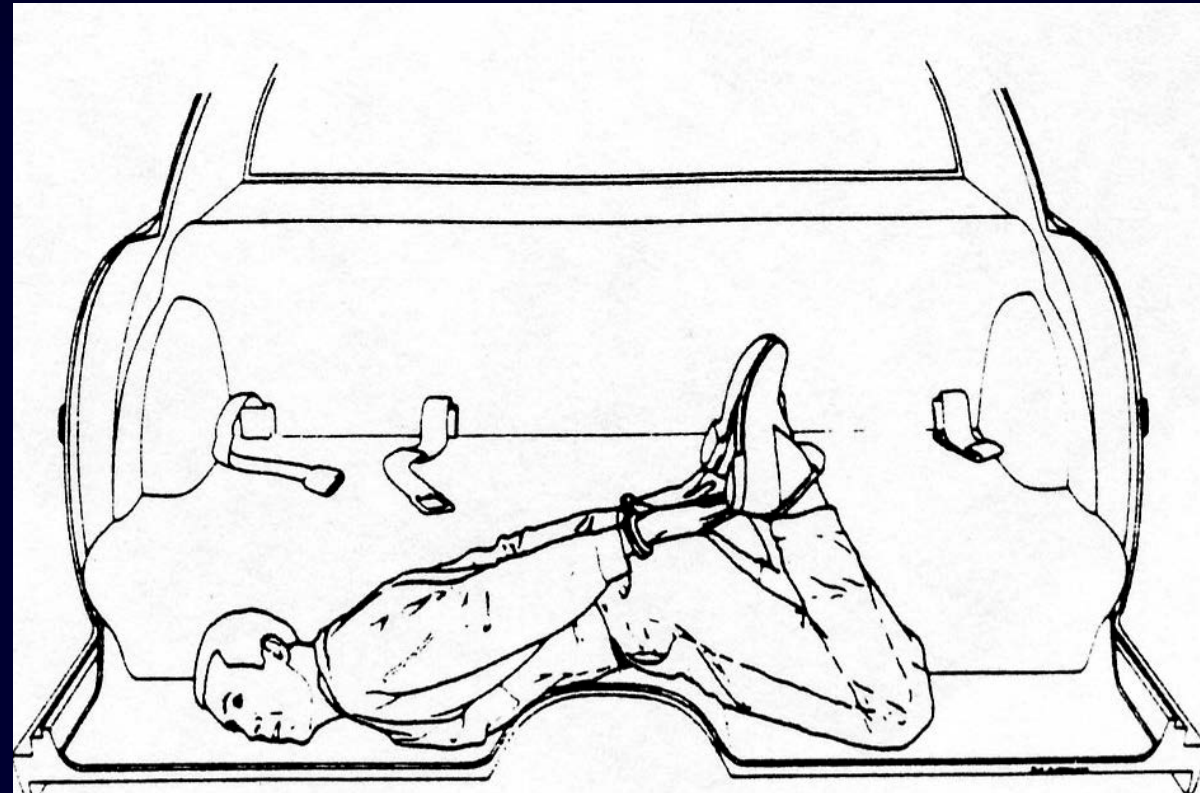
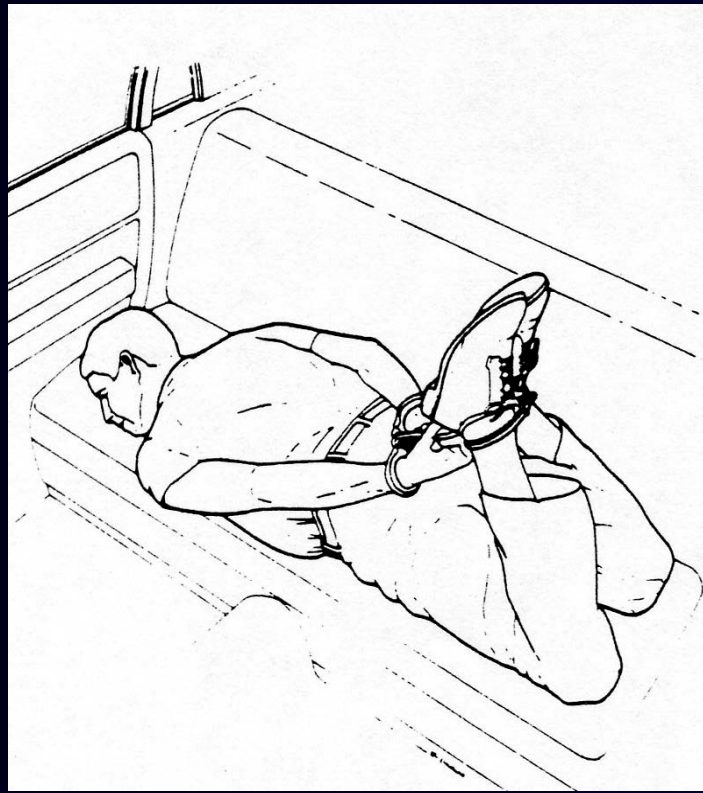


# Positional Asphyxia

- Uncommon cause of death in custody
- Studies of prone position and moderate weight in healthy individuals, +/-



# Positional Asphyxia



# Positional Asphyxia



# Positional Asphyxia



- Petechial hemorrhages; swollen, congested face
- (Might resolve before autopsy)







Read Instructions Prior to Use

**WARNING: IMPROPER USE OF THE [REDACTED]  
MAY CAUSE INJURY OR DEATH**

[REDACTED] is a temporary protective hood for use on those persons where a risk of exposure to infectious disease is present. If used properly, the [REDACTED] can reduce the risk of the wearer transmitting fluids (saliva and mucous) from the facial area, as by spitting, sneezing or coughing. Improper use may result in serious injury or death due to asphyxiation, suffocation or drowning in ones own fluids.

**CONDITIONS FOR USE:**

Do NOT use this product unless...



# Safer Alternatives



# Safer Alternatives



# Safer Alternatives



# Deaths Temporally Associated with Altercation/Restraint

- Was anything covering nose/mouth or around neck?
- In what position held?
- When did they stop moving?
- Body hot and/or sweaty?
- When were they last known to be breathing?
- When was pulse or EKG assessed?



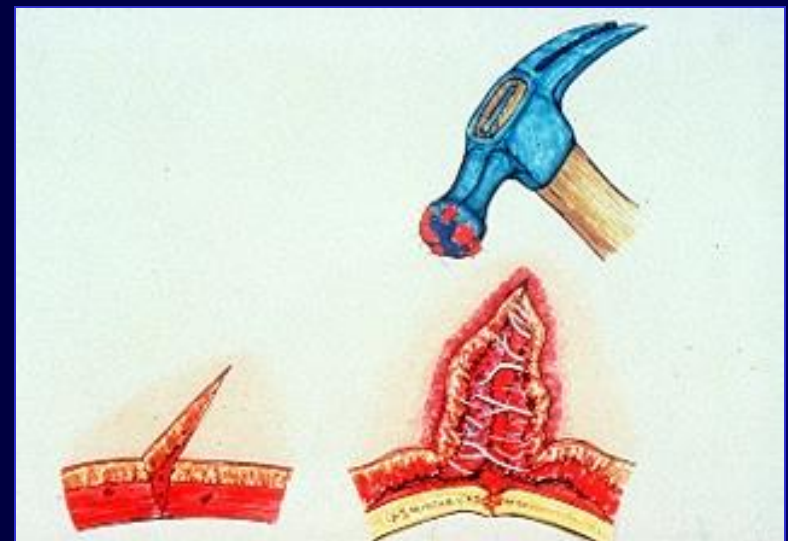
# Almost done...

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- Description of wounds

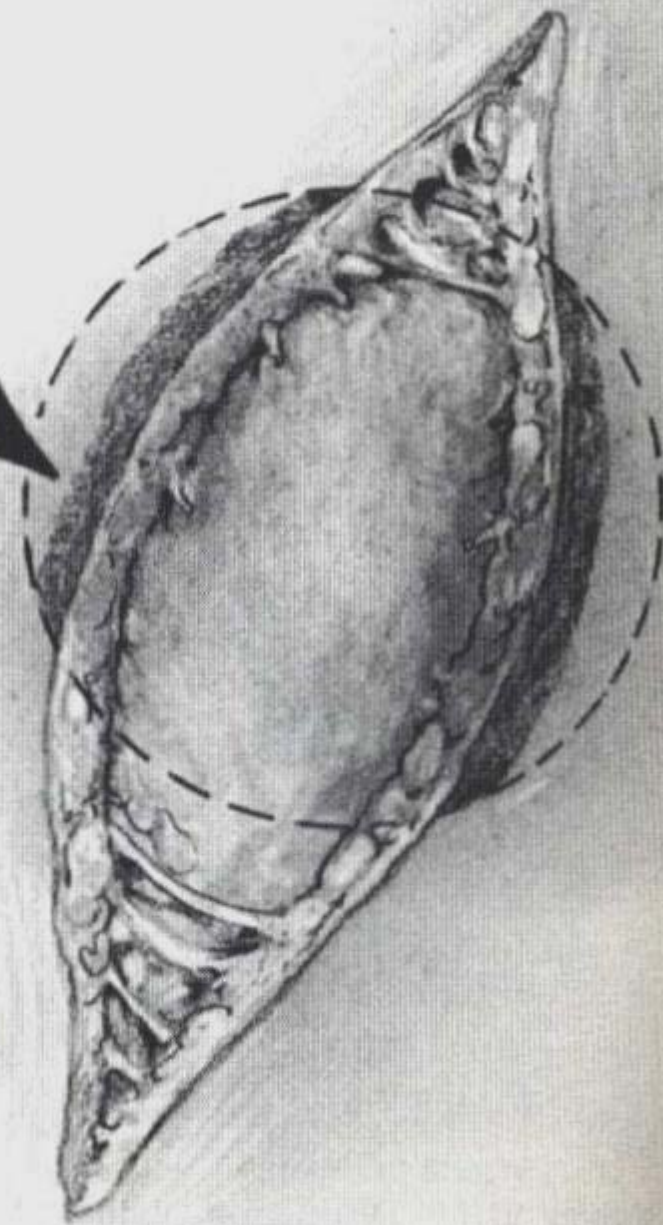


# Blunt-force Injuries

- Abrasions
- Contusions
- Lacerations
- Fractures







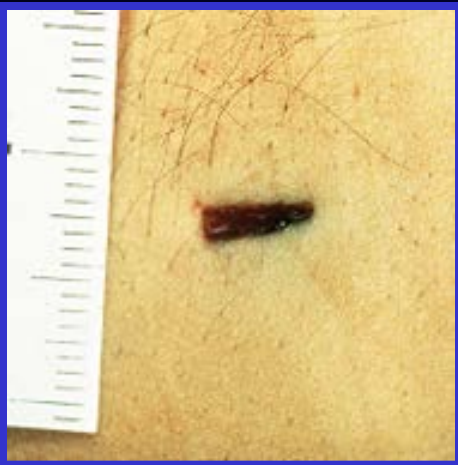
# Sharp-Force Injuries



- Stab Wounds
- Incised Wounds
- Chop Wounds

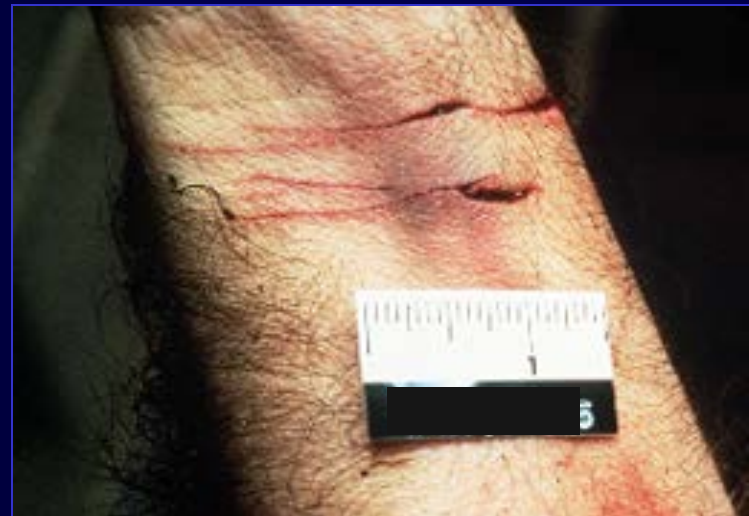
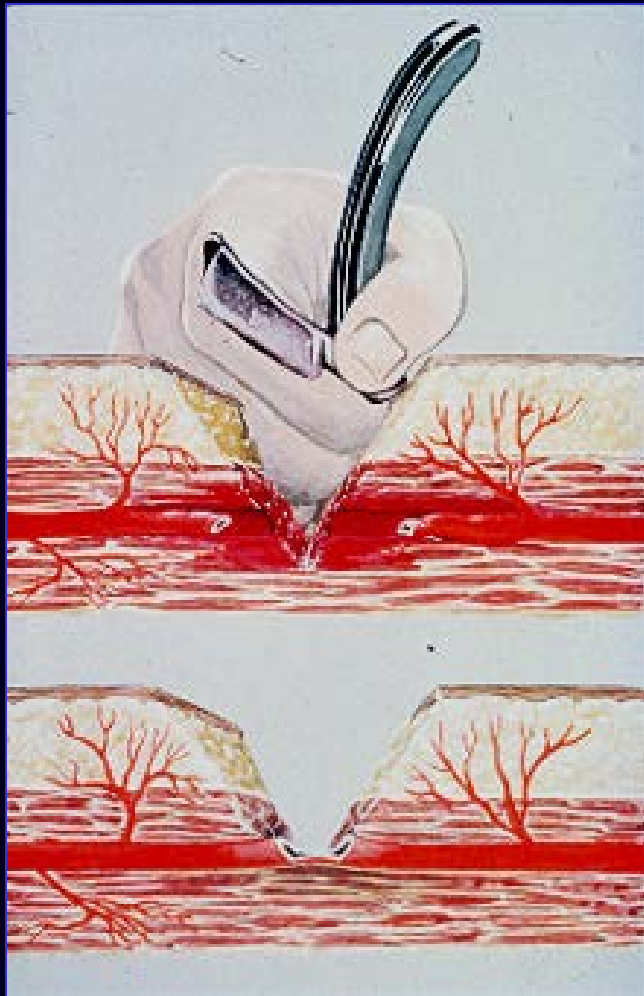
# Sharp-Force Injuries

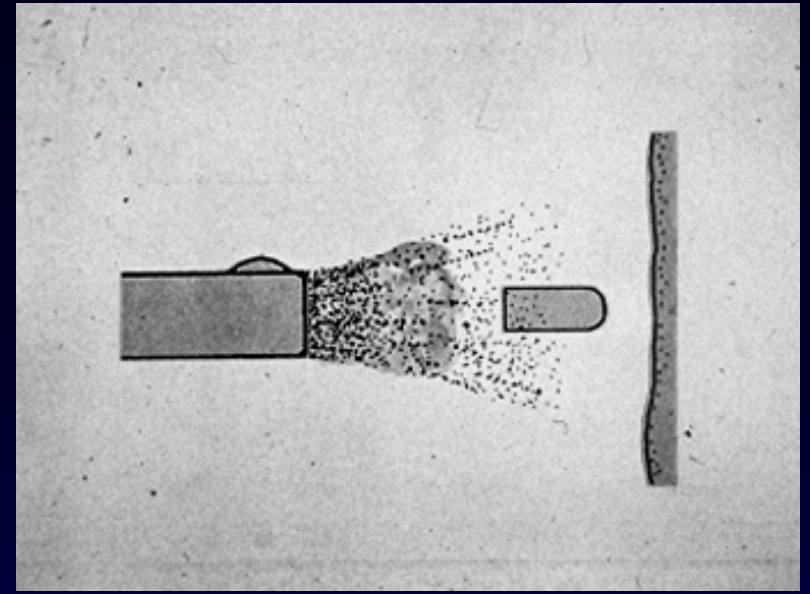
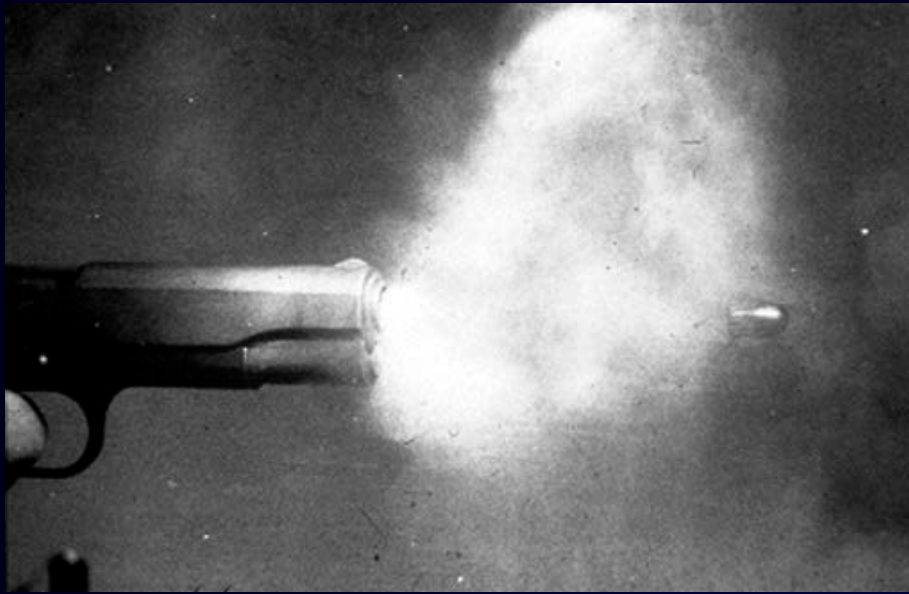
- Stab Wounds
  - caused by pushing an instrument into the skin
  - deeper than they are long



# Sharp-Force Injuries

- Incised wounds
  - Longer than they are deep
  - Cuts or slashes
  - “Hesitation Marks” in suicide

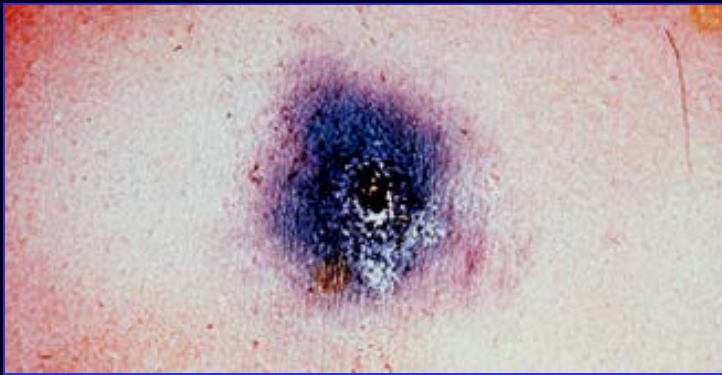


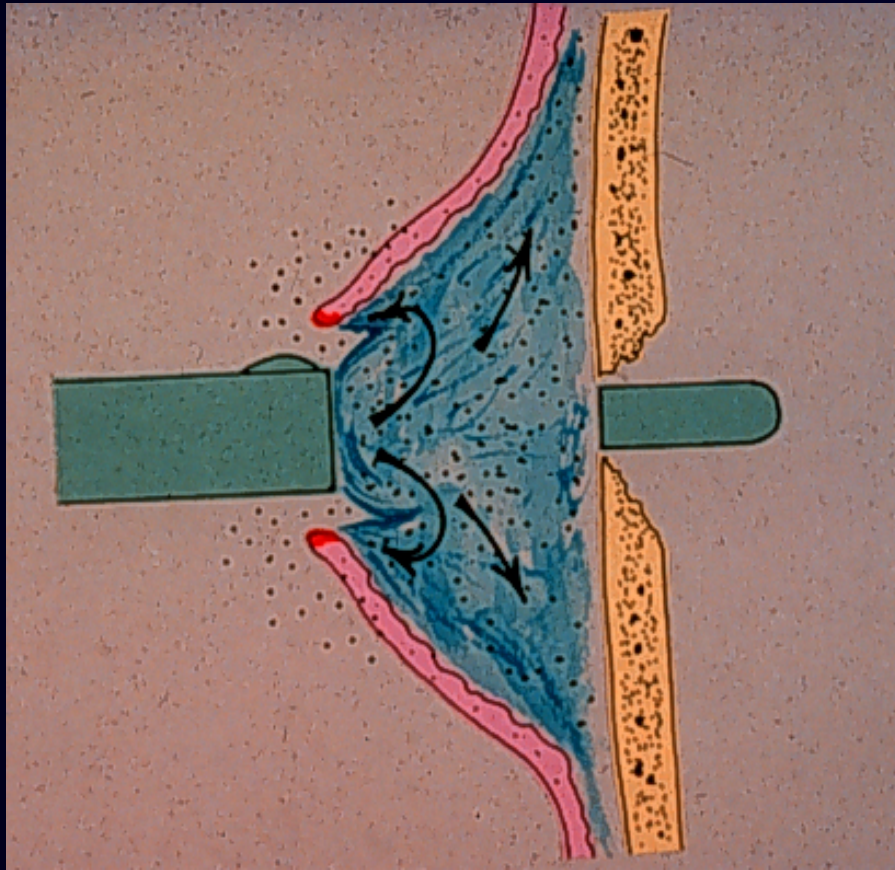


# Gunshot and Shotgun Wounds

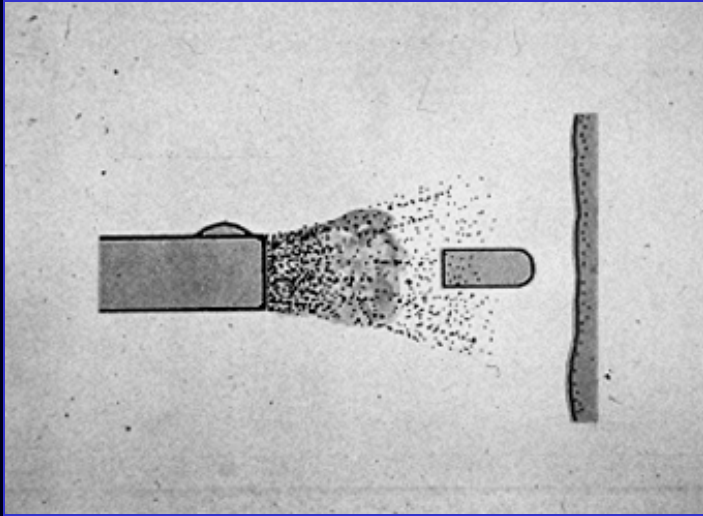
# Gunshot Wounds

## Contact Range





# Gunshot Wounds

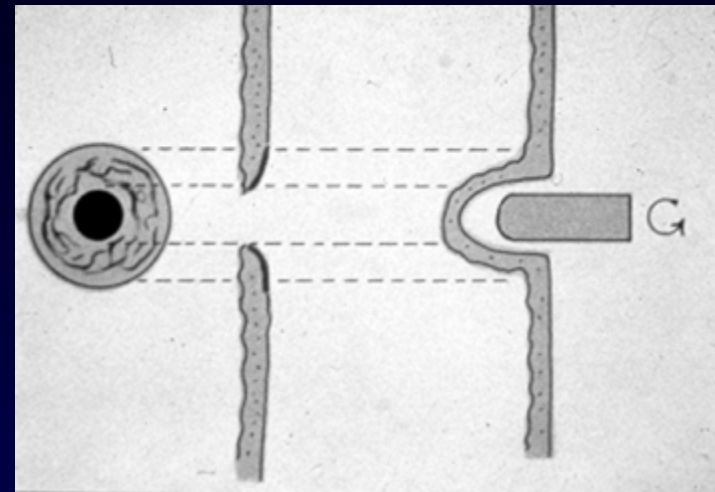
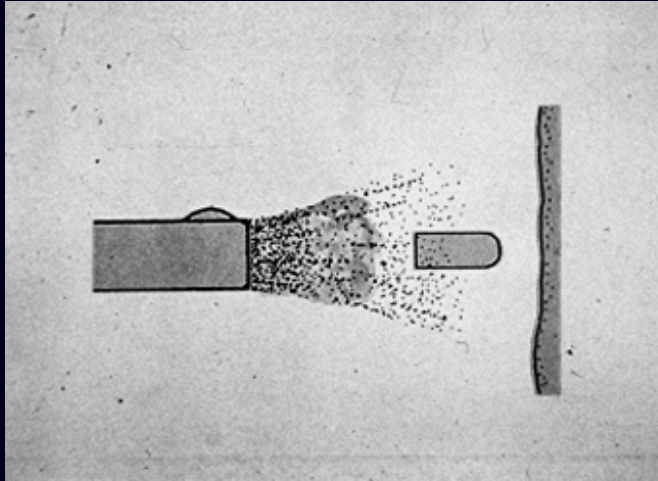


- Intermediate Range





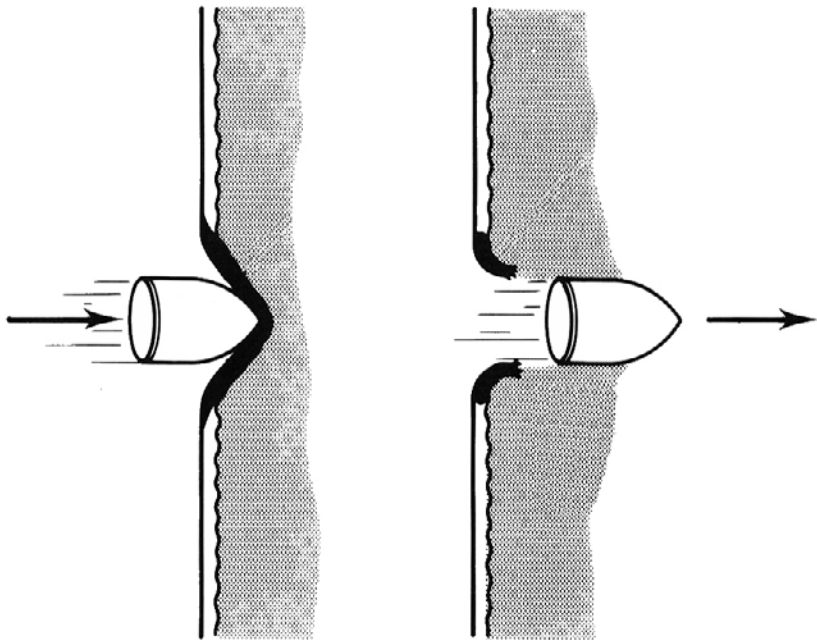
# Gunshot Wounds



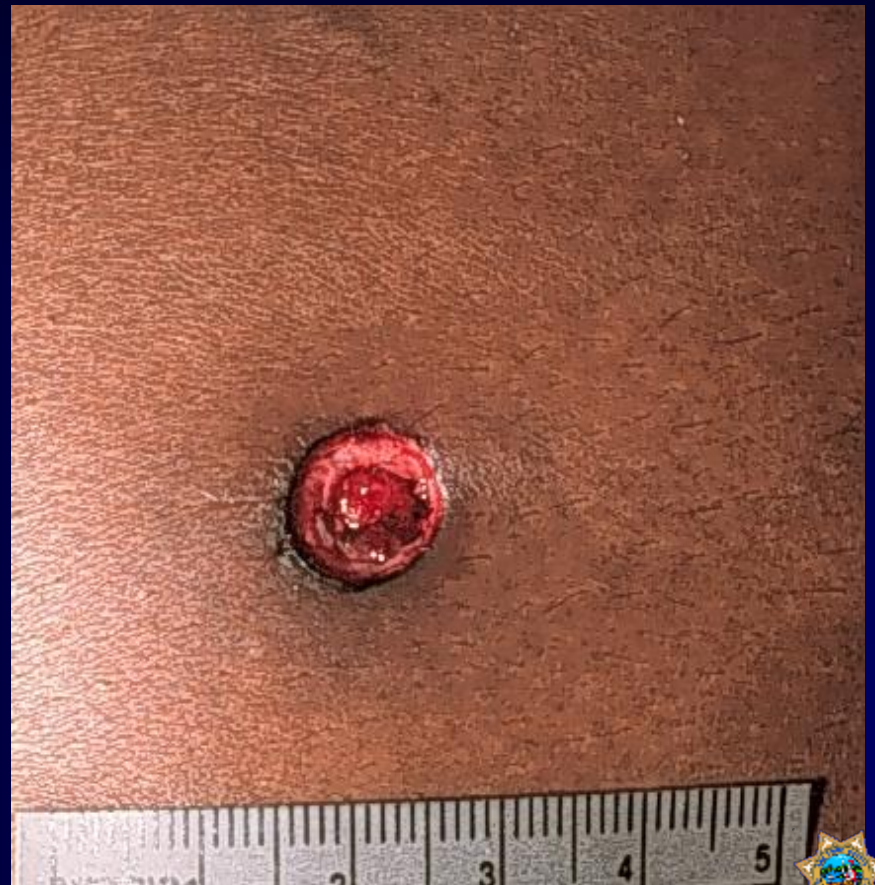
- Distant/Indeterminate range



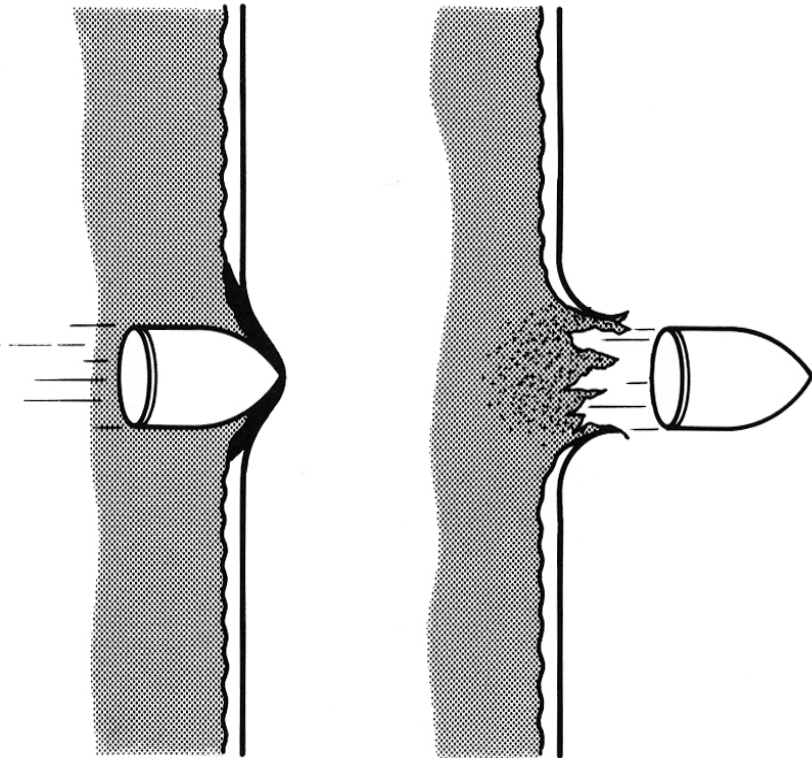
# Entrance Wounds



**ENTRANCE**



# Exit Wounds



**EXIT**

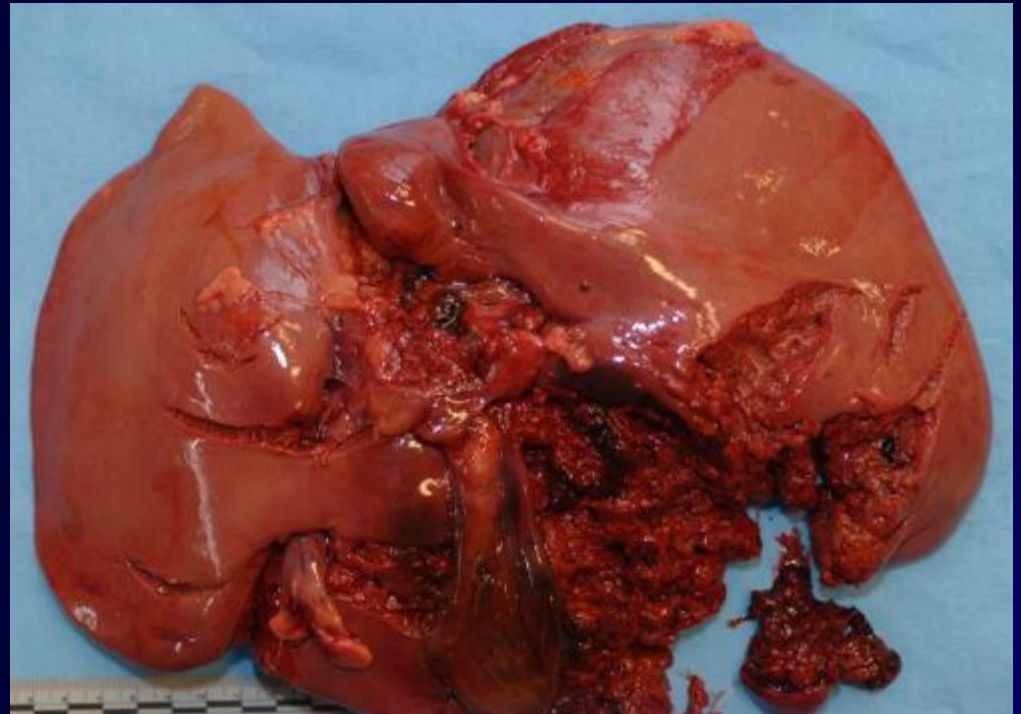


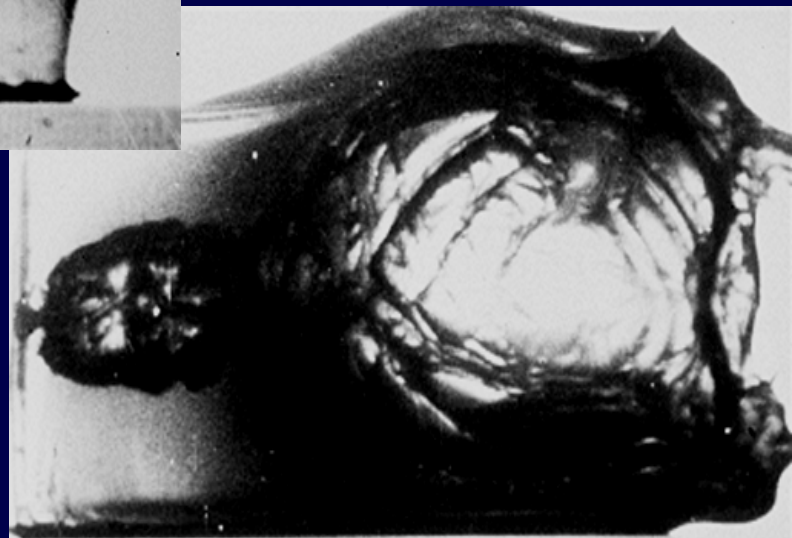
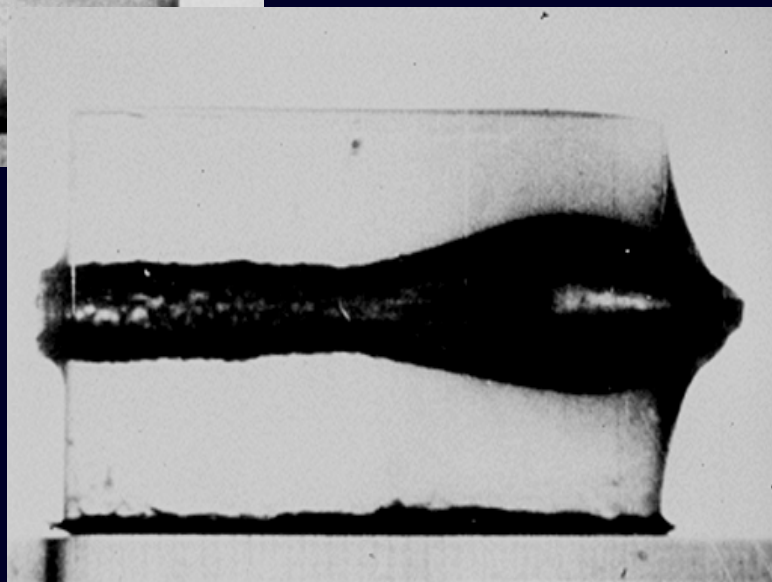
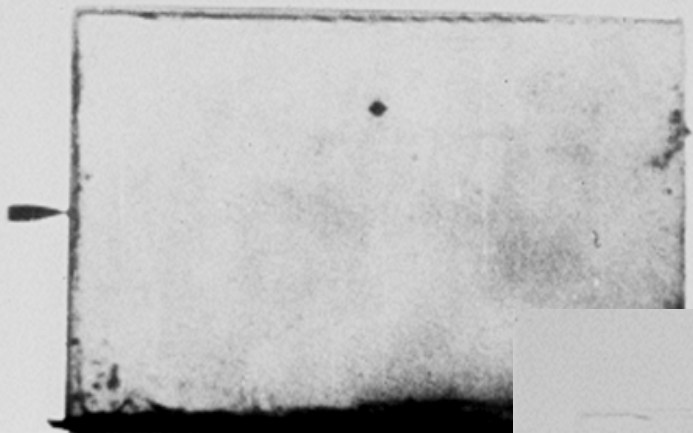




# Distant-range Rifle Wounds

- Tiny entrance wound
- Marked underlying organ/tissue injury





# Summary

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# Questions

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