

# Sharp Force Injuries

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- No relevant financial relationships to disclose

## Objectives

- Define “sharp force injury”
- Discuss three main types of sharp force injuries
- Discuss examination and documentation of sharp force injuries

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## What is a sharp force injury?

- Injury made by a sharp and/or pointed object

### Sharp Force Injury      Blunt Force Injury (Laceration)

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| <ul style="list-style-type: none"><li>• Injury caused by a sharp and/ or pointed object</li><li>• Wound edges are sharp</li><li>• Often without associated contusion or abrasion</li><li>• No tissue bridging*</li></ul> | <ul style="list-style-type: none"><li>• Injury caused by a blunt object striking the body</li><li>• Wound edges are typically irregular</li><li>• May (more often) have associated contusion or abrasion</li><li>• Tissue bridging is present</li></ul> |
|--|---|

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## Three Types of Sharp Force Injuries

- Incision
- Stab
- Chop

## Incised Wounds

- Cutting or slicing type wound that is **LONGER** than it is deep
  - Sharp edge of the instrument is *pressed into and drawn along* the surface of the skin

## Stab Wounds

- Perforating or penetrating type wound that is **DEEPER** than it is long
- The *length and shape* of the wound in the skin, as well as the *depth* of the wound track does NOT always directly correlate with the dimensions of the object that caused the wound

## Chop Wounds

- Wounds produced by heavy objects with a cutting edge
- Intermediate between blunt force and sharp force injuries
  - Involve both laceration and cutting
- Some examples of objects that can cause chop wounds are axes, propeller blades, and machetes

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## Tests and Procedures Prior to Autopsy

- X-ray the body
  - X-ray area of the wound to look for fragments of knife blades, knife tips
  - Chest x-ray to evaluate for air embolus

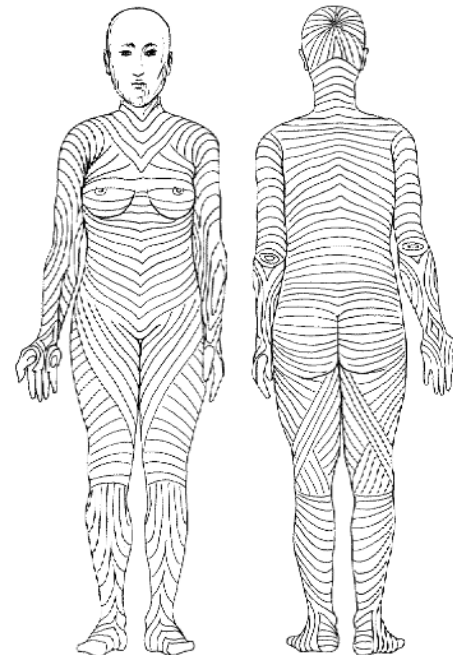
## External Examination

- Examine the weapon (if available) and clothing along with the body
- Wound documentation:
  - Location on the body (measurements in 3 dimensions)
  - Size and shape of wound
  - Orientation of wound
  - Any associated external injuries (such as hesitation marks, contusions, patterned injuries, etc.)
- Photograph the wound(s) with a scale

## Langer Lines

- Correspond to the orientation of the collagen fibers in the skin
- Lines of tension along the body
- Run in different directions all over the body
- Because of varying orientation and tension of Langer's lines, a wound may be distorted depending on its location and orientation on the body

Langer Lines



## Internal Examination

- Document the wound track
  - Examine injuries along the wound track prior to evisceration
  - Measure length (depth) of wound track
  - Describe direction of path through the body
- Recover any fragments of the weapon/ object that may be identified
- Retain tool marks on cartilage and/or bone if present

## Summary

- A sharp force injury is an injury made by a sharp and/or pointed object
- There are three main types of sharp force injuries:
  - Incised wounds (longer than they are deep)
  - Stab wounds (deeper than they are long)
  - Chop wounds (mix between blunt force and sharp force)
- To evaluate sharp force injuries it is important to have sufficient scene information, to perform x-rays, and to appropriately document external and internal findings