

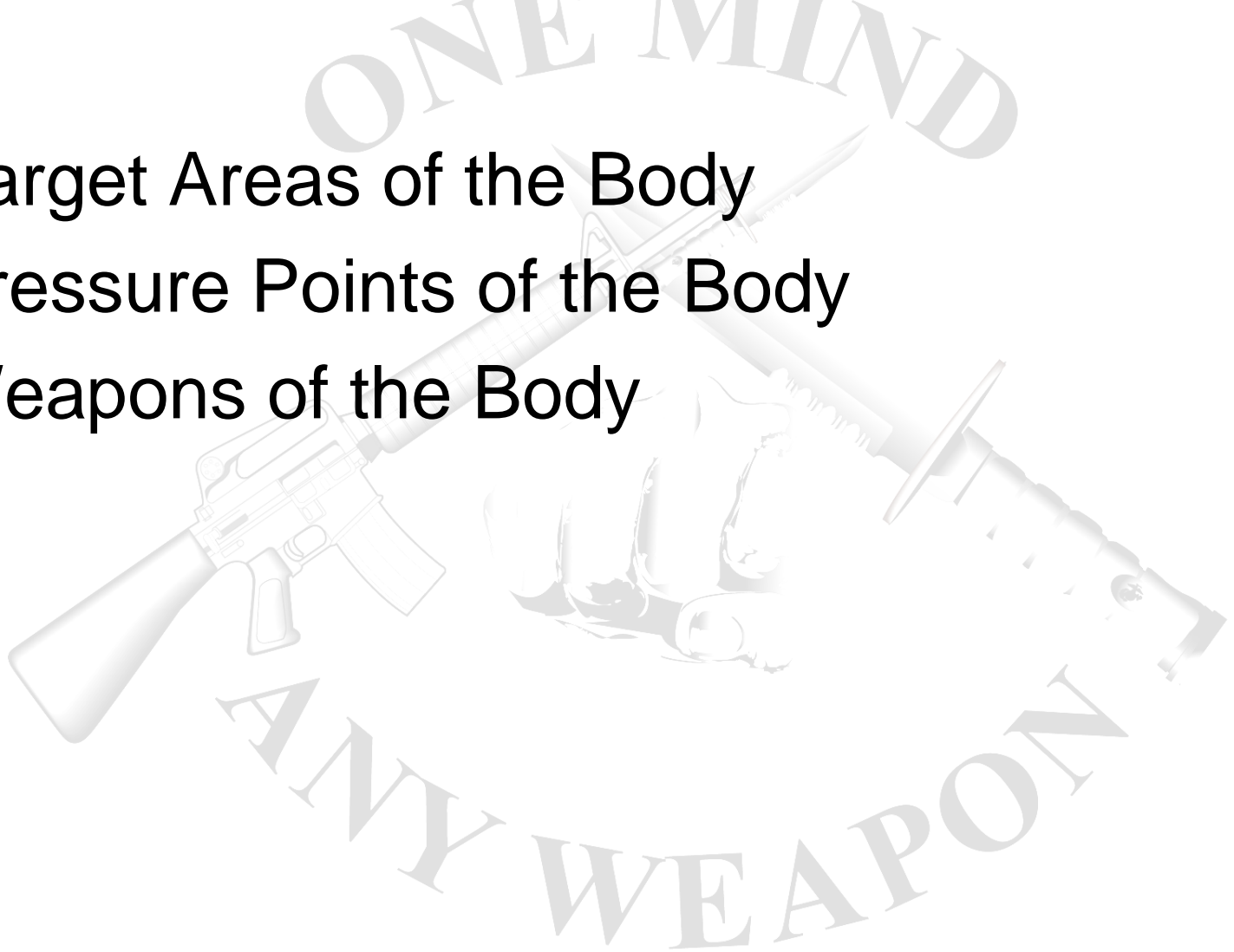
# **ANATOMY AND PHYSIOLOGY**

**MAIB1000**

***Marine Corps Martial Arts Program<sup>1</sup>***

# OVERVIEW

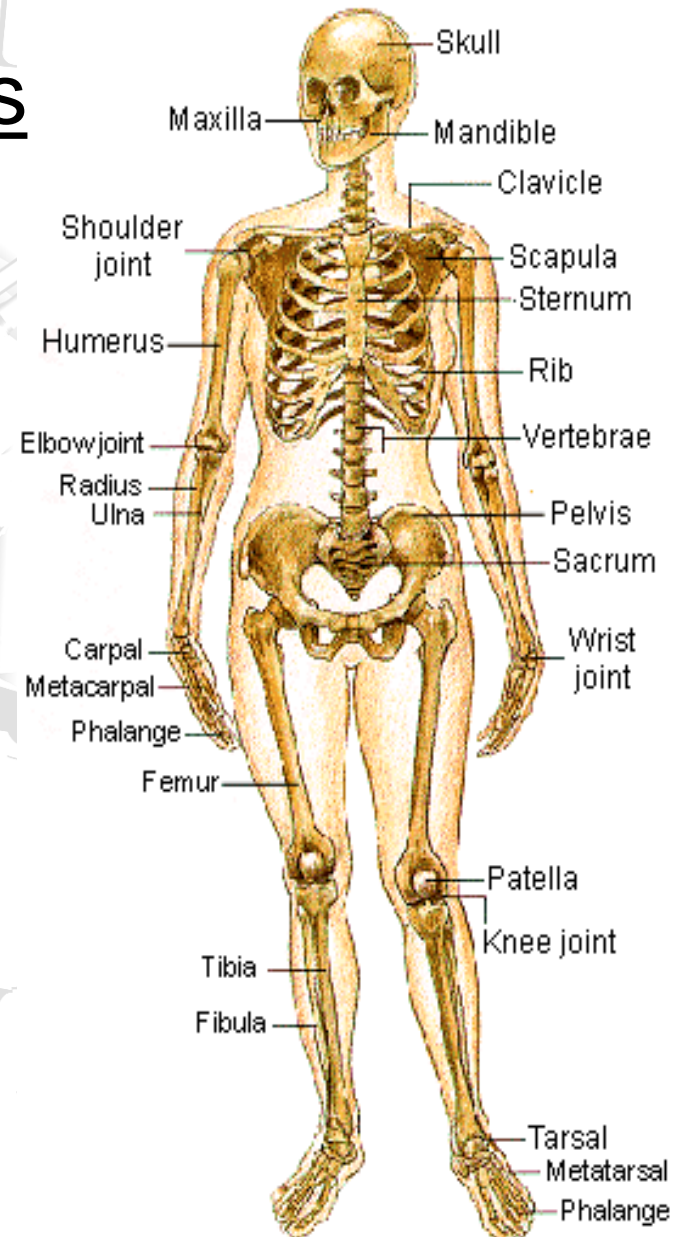
- Target Areas of the Body
- Pressure Points of the Body
- Weapons of the Body



# TARGET AREAS OF THE BODY

## Five Major Target Areas

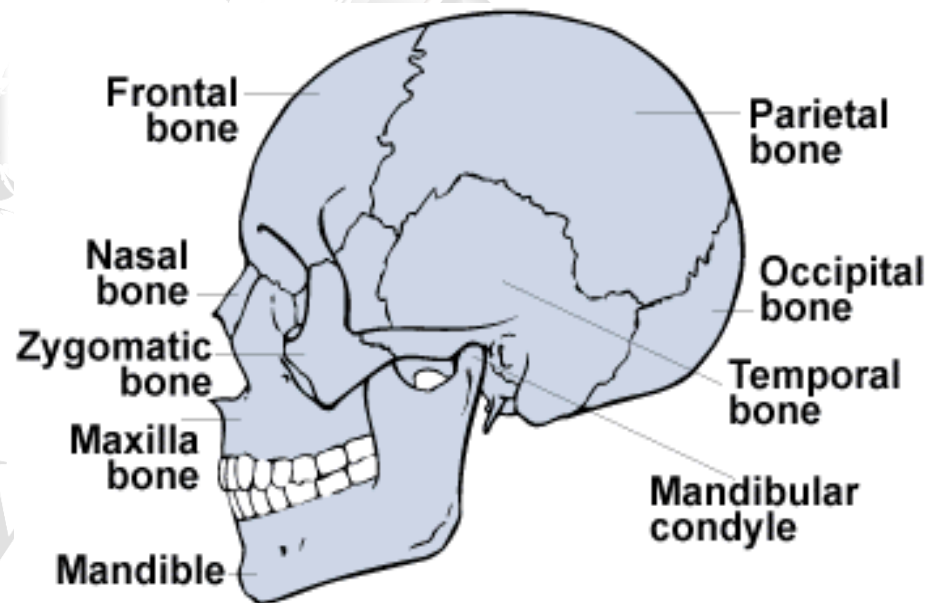
- Head
- Neck
- Torso
- Groin
- Extremities



# TARGET AREAS: HEAD

## Cranium

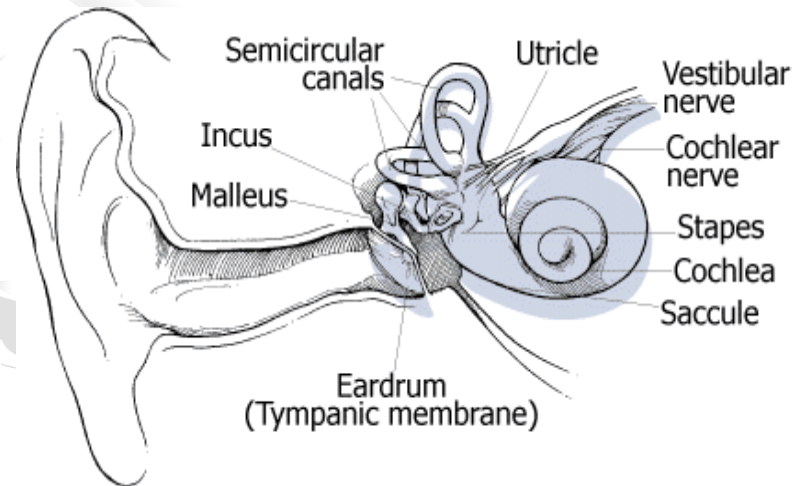
- Anatomy
  - Protects the brain
  - 8 bones fused together
- Results of Attack
  - Concussion
  - Skull Fracture
  - Death



# TARGET AREAS: HEAD

## Ears

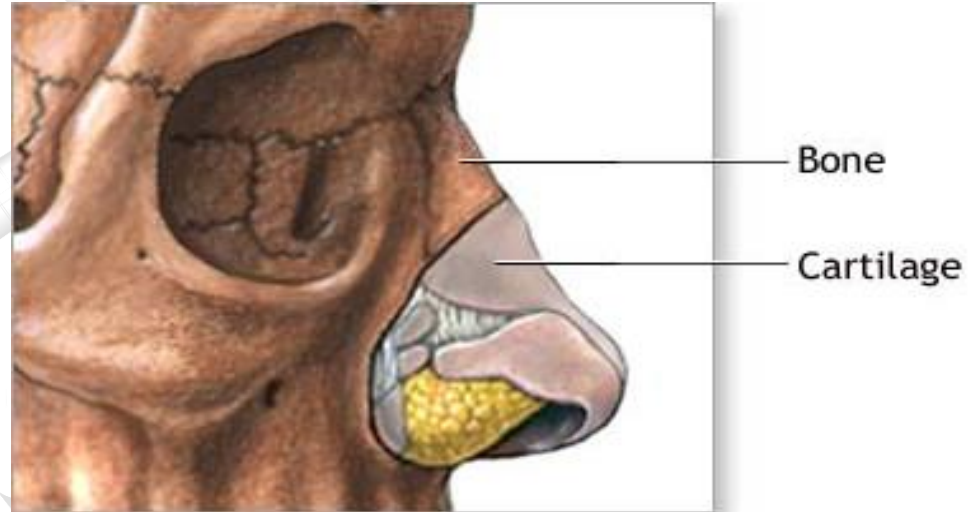
- Anatomy
  - Inner, middle, outer
  - Eardrum
  - Equilibrium, balance
- Results of Attack
  - Immobilization effect
  - Burst eardrum
  - Loss of balance



# TARGET AREAS: HEAD

## Nose

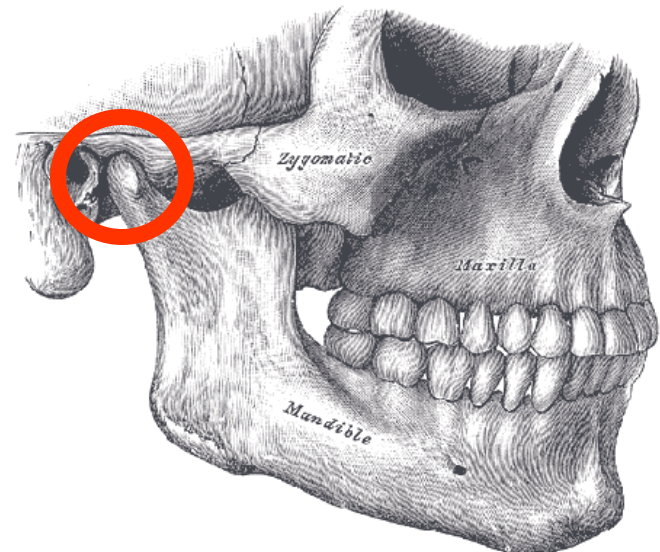
- Anatomy
  - Cartilage
  - 2 nasal bones
  - Bridge of nose
- Results of Attack
  - Watering eyes
  - Nose bleed
  - Broken bone/cartilage



# TARGET AREAS: HEAD

## Mandible

- Anatomy
  - Aka. Jaw
  - Temporomandibular joint (TMJ)
- Results of Attack
  - Unconsciousness
  - Dislocation
  - Broken bone

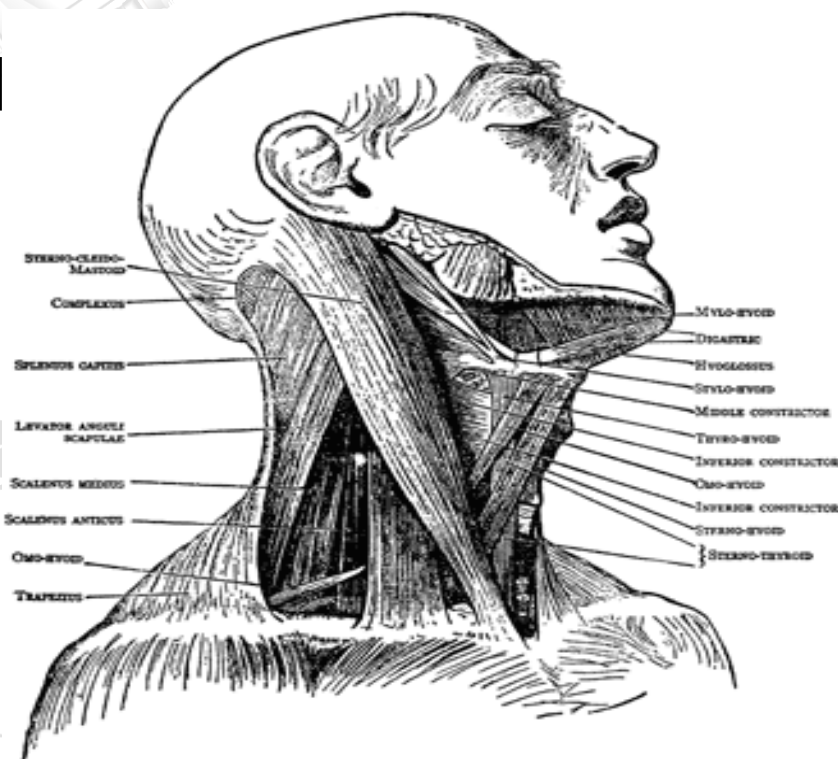




# TARGET AREAS: NECK

## Sides of Neck

- Anatomy
  - Sternocleidomastoid
  - Carotid artery
  - Jugular vein
- Results of Attack
  - Dizziness
  - Unconsciousness
  - Death

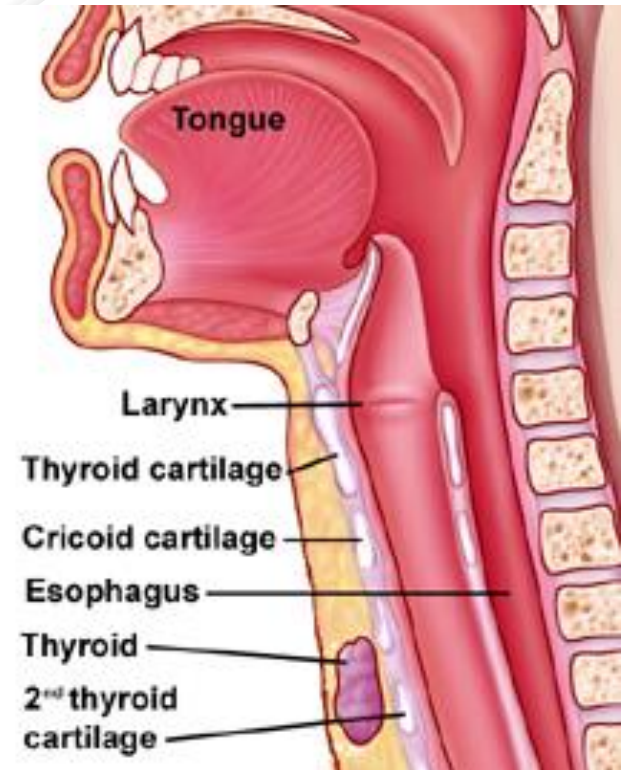




# TARGET AREAS: NECK

## Throat

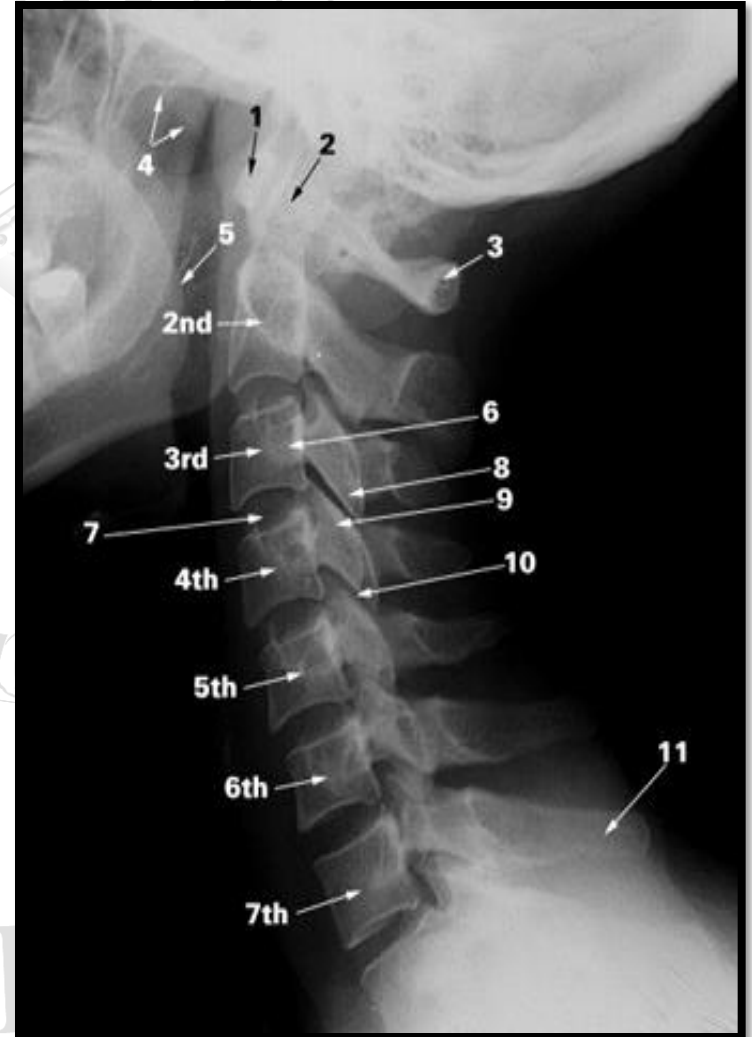
- Anatomy
  - Esophagus
  - Trachea
  - Jugular notch
- Results of Attack
  - Collapse/puncture trachea
  - Distraction (jugular notch)
  - Shock, unconsciousness, death



# TARGET AREAS: NECK

## Back of the Neck

- Anatomy
  - Cervical vertebrae
  - Spinal cord
- Results of Attack
  - Misalign the vertebrae
  - Damage spine
  - Paralysis
  - Death



# TARGET AREAS: TORSO

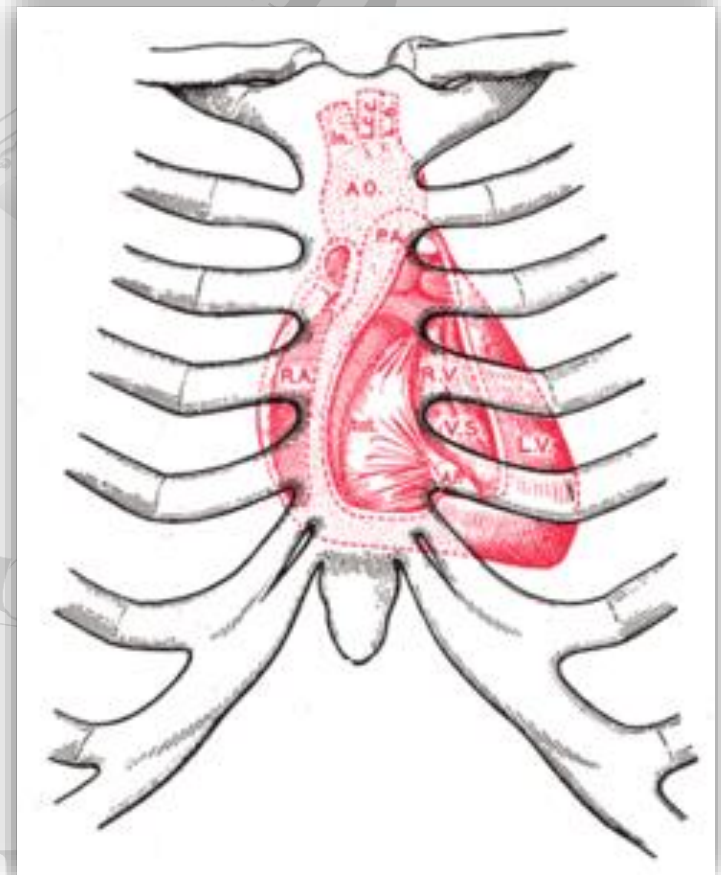
## Spinal Column

- Anatomy
  - 33 vertebrae (5 regions)
  - Supports the body
  - Protects the spinal cord
- Results of Attack
  - Severed spinal cord
  - Lose functions
  - Shock, unconsciousness, death

# TARGET AREAS: TORSO

## Thorax (Ribcage)

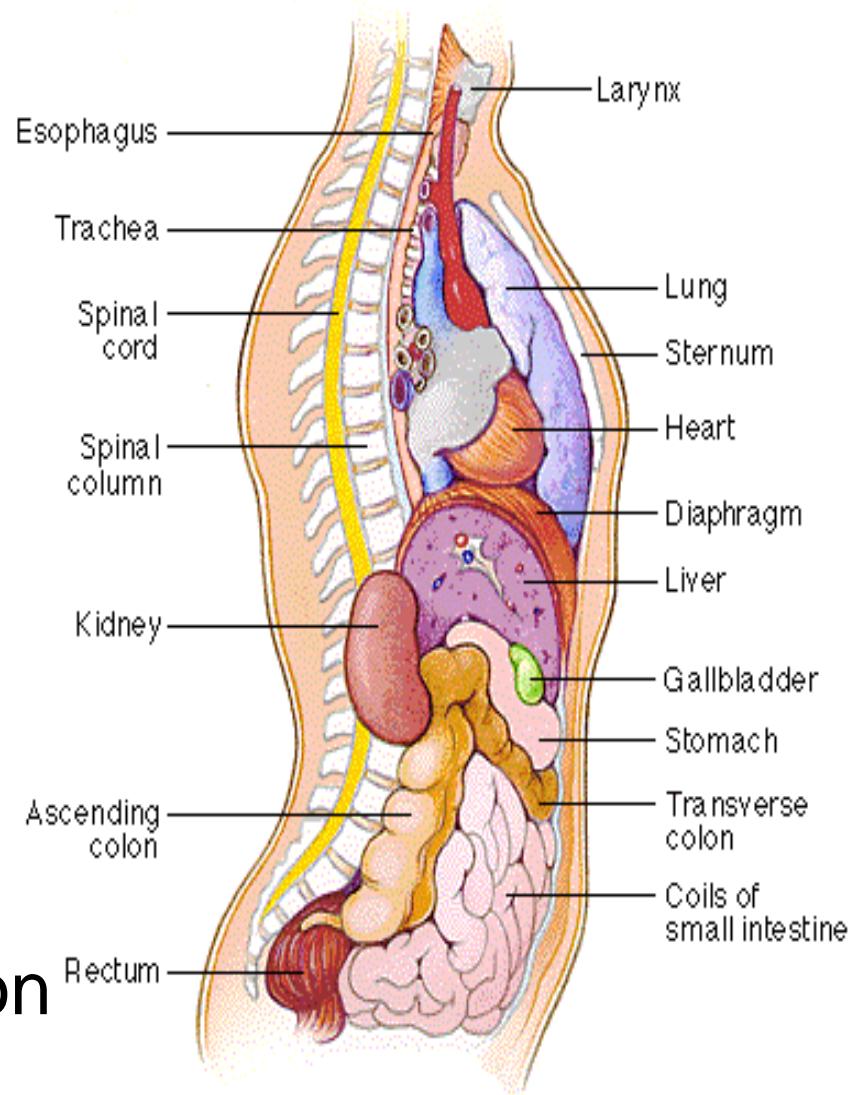
- Anatomy
  - 12 pairs of ribs
  - Floating ribs
  - Xiphoid process
- Results of Attack
  - Intense pain
  - Fractured bones
  - Punctured organs



# TARGET AREAS: TORSO

## Internal Organs

- Anatomy
  - Lungs
  - Heart
  - Liver
  - Spleen
  - Kidneys
- Results of Attack
  - Disrupt bodily function
  - Stop heart, death



# TARGET AREAS: GROIN

## Groin

- Anatomy
  - Lower abdomen and inner thighs
  - Large arteries and nerves
  - Very sensitive
- Results of Attack
  - Extreme pain
  - Male and female
  - Fractured pubic bone

# TARGET AREAS: GROIN

## Coccyx (Tailbone)

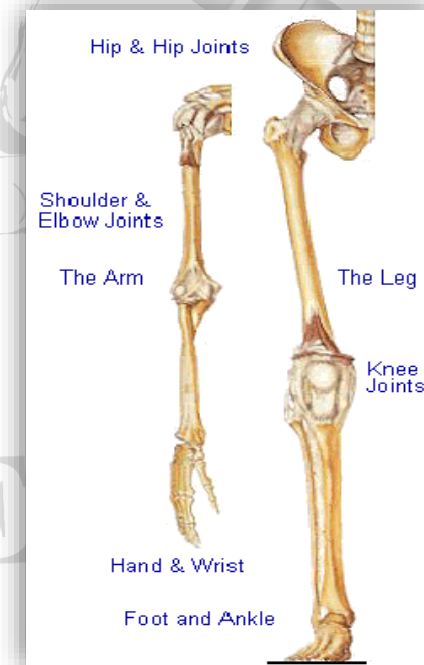
- Anatomy
  - Final vertebrae
  - Connects muscles
  - Shock absorber
- Results of Attack
  - Severe pain
  - Paralysis
  - Immediate disability



# TARGET AREAS: EXTREMITIES

## Joints

- Anatomy
  - Hinge: elbows, knees
  - Ball and socket: shoulders, hips
  - Wrists & ankles
- Results of Attack
  - Joint manipulation
  - Pain compliance
  - Damaged tissue



# TARGET AREAS: EXTREMITIES

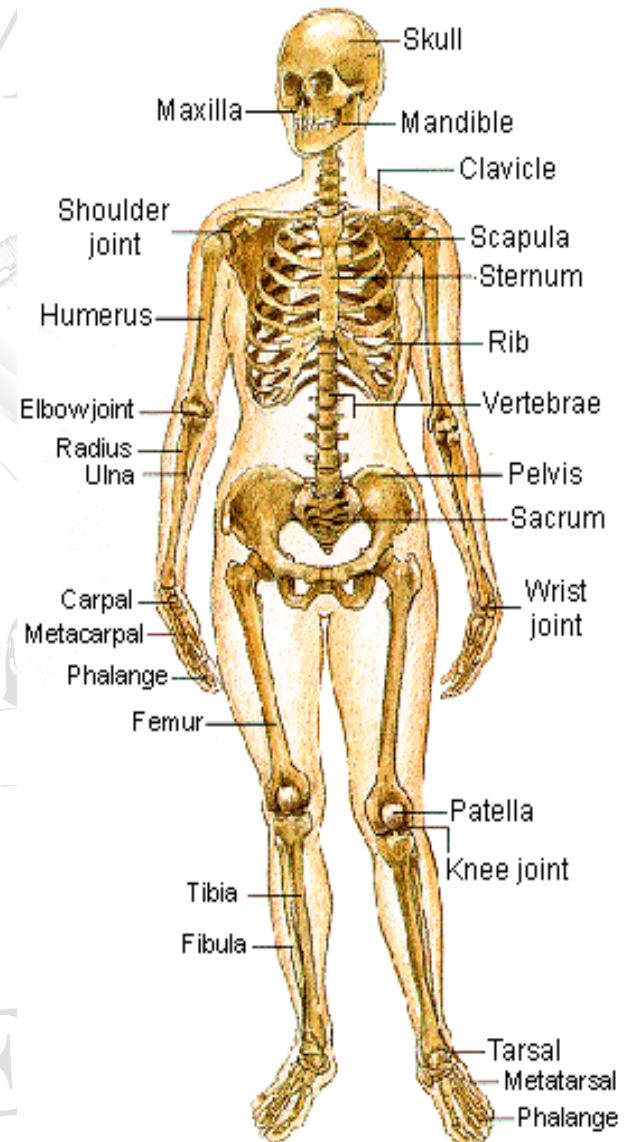
## Muscles

- Anatomy
  - Skeletal
  - Smooth
  - Cardiac
- Results of Attack
  - Bruising
  - Tearing
  - Pain

# TARGET AREAS: EXTREMITIES

## Bones

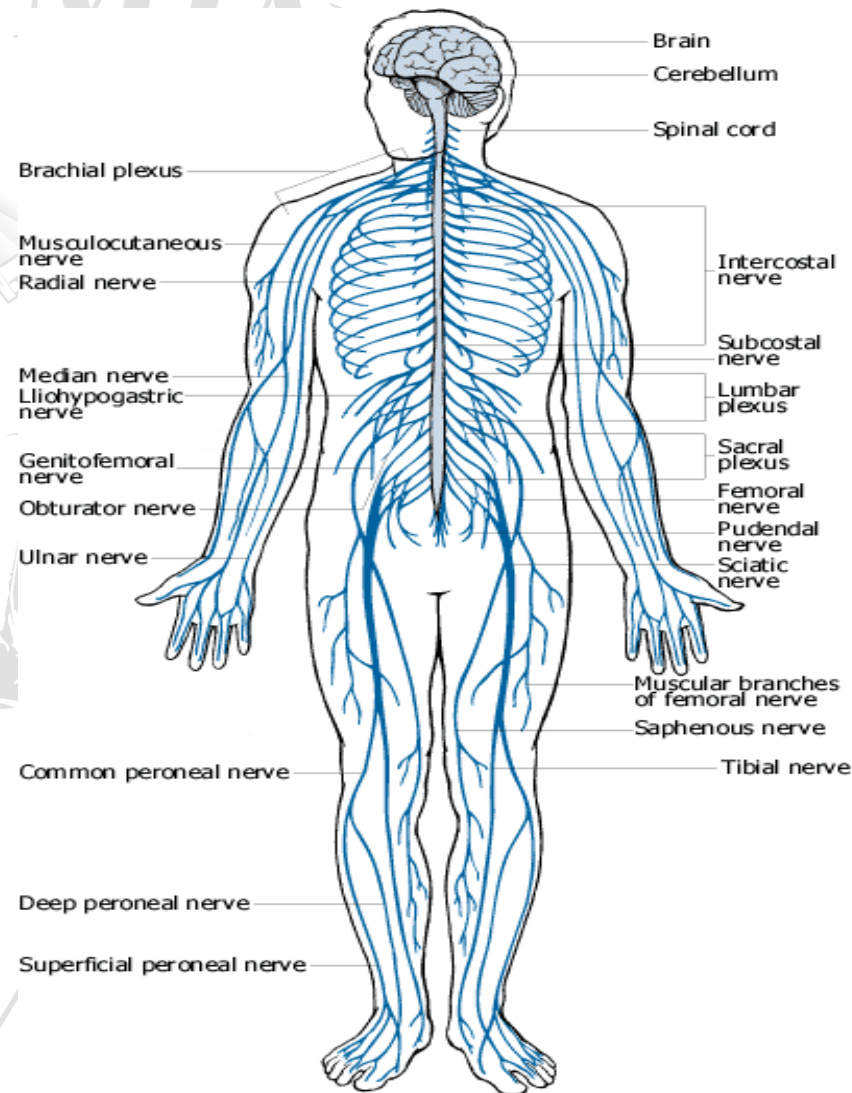
- Anatomy
  - Humerus, radius, ulna
  - Clavicle (collarbone)
  - Femur, tibia, fibula
- Results of Attack
  - Bruise or fracture
  - Extreme pain
  - Loss of function



# TARGET AREAS: EXTREMITIES

## Nerves

- Anatomy
  - Radial
  - Ulnar
  - Femoral
  - Peroneal
- Results of Attack
  - Pain
  - Temporary paralysis
  - Effectiveness varies





**QUESTIONS?**

# PRESSURE POINTS OF THE BODY

- Nose
- Eyes
- Mastoid Process
- Brachial Plexus

# PRESSURE POINTS OF THE BODY

## Nose

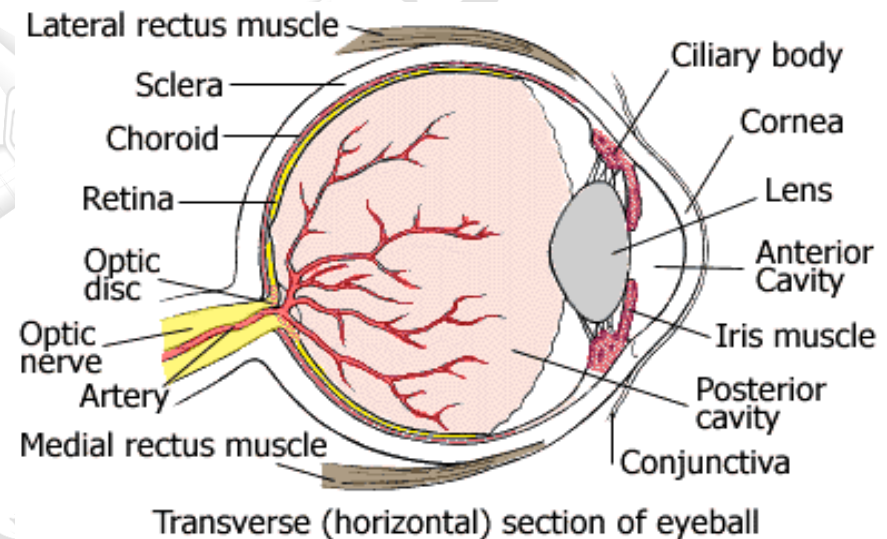
- Anatomy
  - Positioned across nerves
  - Infra-orbital nerve
- Results of Attack
  - Pressure beneath the nose
  - Upward angle
  - Pain compliance



# PRESSURE POINTS OF THE BODY

## Eyes

- Anatomy
  - Soft tissue
  - Orbital fissures
- Results of Attack
  - Extremely sensitive
  - Watering, closing
  - Pain, shock



# PRESSURE POINTS OF THE BODY

## Mastoid Process

- Anatomy
  - Point of attachment for muscles
  - Recessed behind the ear
- Results of Attack
  - Pressure at upward angle
  - Pain compliance

# PRESSURE POINTS OF THE BODY

## Brachial Plexus

- Anatomy
  - Point where nerves combine
  - Located underneath the collarbone
  - Accessed under the armpit
- Results of Attack
  - Intense pain
  - Pain compliance



**QUESTIONS?**



# **WEAPONS OF THE BODY**

# WEAPONS OF THE BODY

## Arms

- Hands
  - Instant response
  - Primary striking weapon
  - Choking, grabbing, controlling
- Elbows
  - Amplified force
  - Larger bones
  - Target areas

# WEAPONS OF THE BODY

## Legs

- Feet
  - Not instant weapons
  - Training & coordination
  - Kicks & Stomps
  - Shins may be used
- Knees
  - Most powerful strike
  - Large striking surface
  - Target areas



The background of the slide features a large, faint, circular seal of the Federal Bureau of Investigation (FBI). The seal contains the words "ONE MIND" at the top and "ANY WEAPON" at the bottom. In the center of the seal is a detailed illustration of a hand holding a handgun, with a knife positioned diagonally across the hand and the gun.

**QUESTIONS?**

# REVIEW

- Target Areas of the Body
- Pressure Points of the Body
- Weapons of the Body

