

Chapter 6: Identifying John & Jane Doe

I. Identifying the Body***Digging Through Artifacts***

The following artifacts found with an unidentified body can potentially point to who the deceased was:

1) **Jewelry:** _____

2) **Clothing:** _____

3) **Burial Items:** _____

Scars, Birthmarks, & Tattoos

Distinguishing marks on the body can narrow the number of possible matches when attempting to identify a John/Jane Doe:

1) **Birth Marks:** _____

2) **Tattoos:** _____

3) **Scars & Surgical Appliances:** the presence of a scar or surgical appliances on/in a body may be useful in making a positive identification:

- a) **Scars:** if the victim has surgical scars, a search through missing persons reports for people with the same sex, age, race, & medical history may lead to a positive identification.
- b) **Surgical Appliances:** artificial hips, pacemakers, & heart valves have engraved serial numbers that can be traced to the hospital where the surgery took place & ultimately the person who received it.

Fingerprint & Dental Analysis

Fingerprints can be obtained by injecting saline into the fingertips, causing them to swell & reveal the friction ridges. The resulting prints can then be matched against those in missing person's databases.

Missing, misaligned & reconstructed teeth can be matched with dental records to establish an identity. The presence of chips & filling add even more individuality to the dental pattern.

II. Identifying Skeletal Remains***Working with Skeletons***

When all that remains of an individual is their skeleton, the expertise of a forensic anthropologist is usually required to make a positive identification. During the investigation, the forensic anthropologist will attempt to determine age, sex, stature, race, the cause of death, & the time since death.

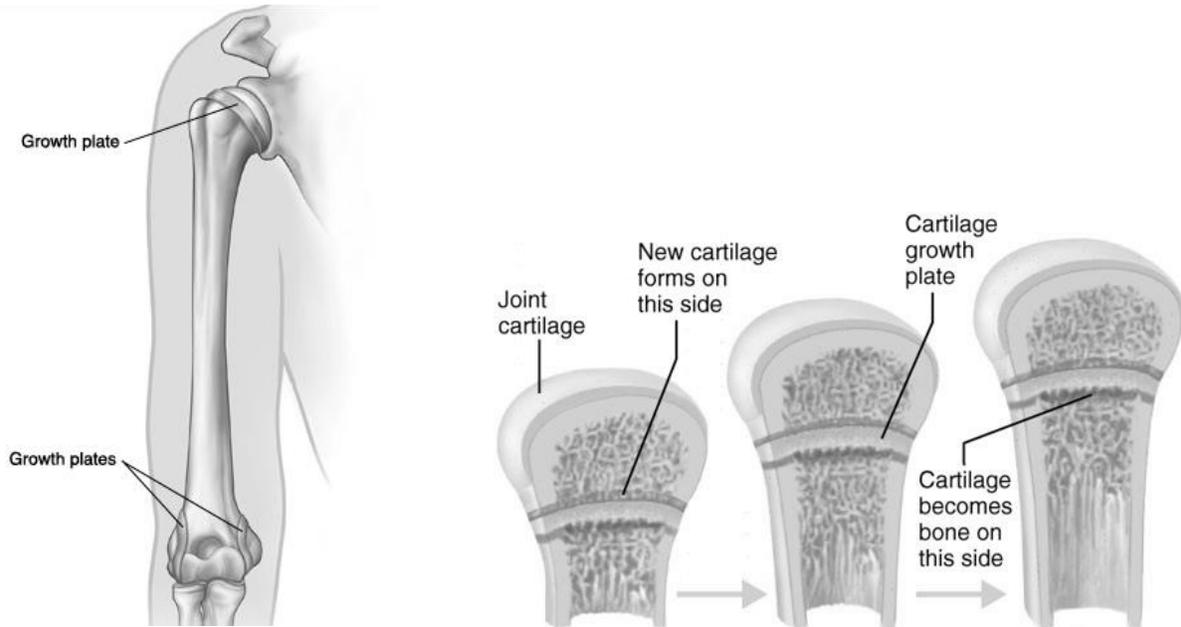
Determining Age & Stature of Skeletal Remains

Some details of the skeleton that are useful in determining the age of a victim include the following:

- 1) **Teeth:** since permanent teeth are in place by age 12 & wisdom teeth by age 18, teeth are useful in determining age of anyone who was 18 or younger at the time of death.

2) **Leg & Arm Bones:** can help determine the age of people under the age of 25, after which the growth plates at the ends of these bones fuse.

Figure 1: Growth Plates



- 3) **Ribs:** areas where the ribs join the breastbone are *smooth & rounded when you're young*, but become *pitted & sharp as you age*. Examination of these areas can help to estimate age within 1.5 years up to age 30 & within 5 years up to age 70.
- 4) **Bone Density:** as you age, bones lose calcium & become less dense.

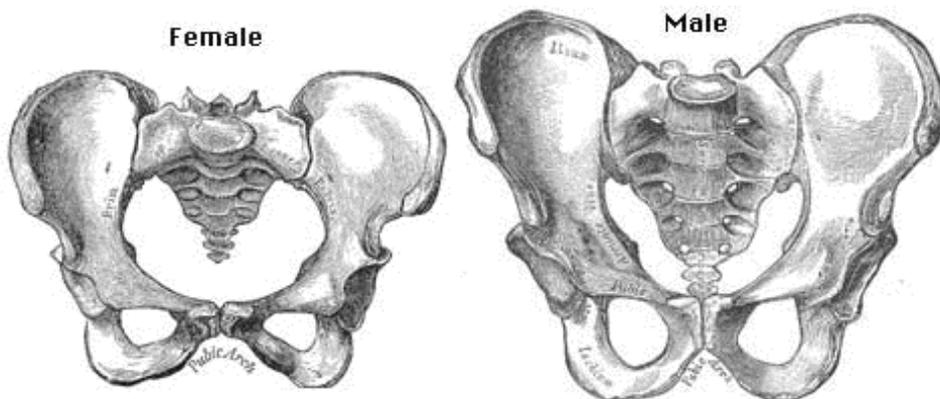
Estimating Stature: _____

Determining Gender & Race of Skeletal Remains

Male Pelvis (Hip): _____

Female Pelvis (Hip): _____

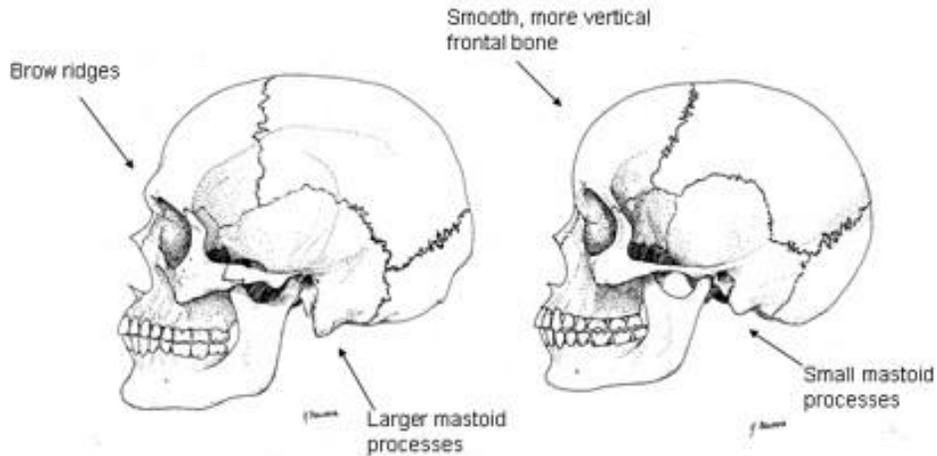
Figure 2: Male vs Female Pelvis



Male Jawbone: _____

Female Jawbone: _____

Figure 3: Male vs Female Jawbones



Determining the race of skeletal remains is extremely difficult, if not impossible, because no single skeletal trait is racially distinct.

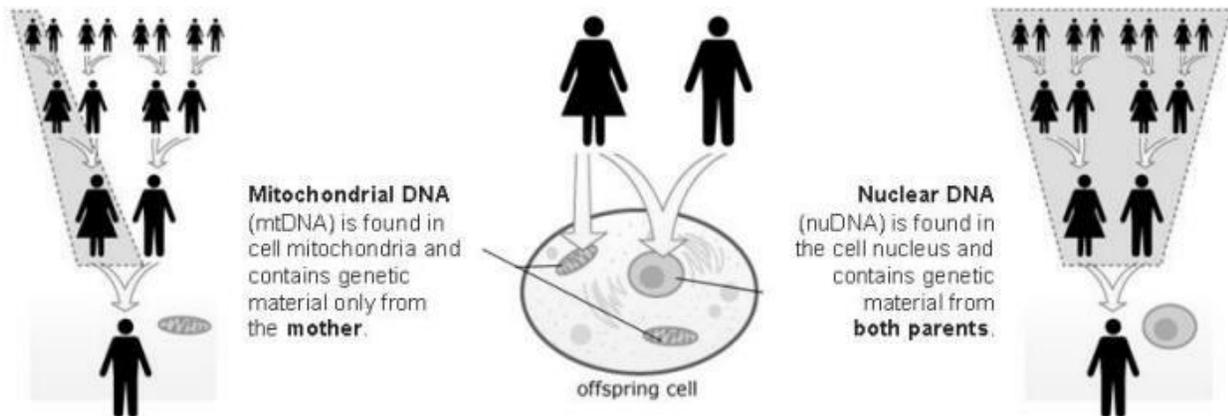
Mitochondrial DNA

A new technique that is being used for identifying skeletal remains is matching **Mitochondrial DNA (mtDNA)** from a corpse with that of a living relation.

Mitochondrial DNA: _____

a) Unlike other forms of DNA, mtDNA can survive long periods of time without breaking down. It can also be extracted from teeth, bone, & even the shafts of hair.

Figure 4: Inheritance of mtDNA



Determining Cause & Manner of Death

When examining skeletal remains, the forensic anthropologist can distinguish between any blunt-force injuries & sharp-force injuries that may be present:

Blunt Force Injuries: _____

Sharp Force Injuries: _____

One problem facing the investigators is whether the bone injuries occurred around the time of death or at some earlier/later point in time.

Well-healed Fractures: _____

Unhealed (Perimortem) Fractures: _____
