YogaFX™ you"ll love it !

International Yoga Teacher Training Academy

THE SKELETAL SYSTEM

Name : .....

Home Practice Start Date : ...../...../.....

"AWARENESS"

MAKE SURE THAT YOU CARRY NO RESISTANCE

NO hatred, no negative energy Live to "Have no enemies"

Leaving un-resolved worries will only catch up with your past trail of sad destruction,

Turn bad energy into Positive.

Respect people's personal space and they will love you for who you are alone.

"CHANGE"

REAL FREEDOM IS LIFE IN ITS PUREST FORM

IT is felt not as a passing by experience but also as strong presence. It is to be who you are, to feel within you the good that has no enemy to experience the joy of just simply "Being" that depends only on your inner-self.

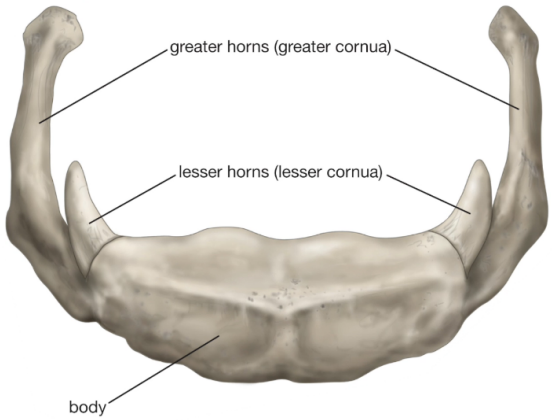
Loneliness is the first test. See if you can survive the darkness solitude only after this will you then be able to see your life through 3 eyes, instead of 2.

The Skeletal System
CONTENT

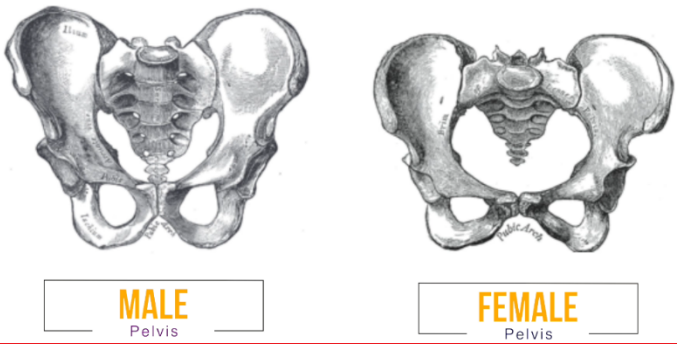
Memo to self:

The Skeletal System

In the fascinating realm of human anatomy, **newborns** enter the world with approximately **300 bones**, which eventually fuse to form the **adult's 206 bones**. Joints, where bones unite, play a crucial role. Notably, **humans possess 12 ribs,** though some individuals may have 13. Surprisingly, **teeth surpass bone strength**. The knee, the body's largest joint, **stands out alongside the femur,** the longest, and the stapes, **the smallest in the ear.**



Unveiling the intricacies of the skeletal system, this vital framework provides structural support, defining **body shape, alignment**, and **safeguarding essential organs.** Encompassing bones, cartilage, tendons, and ligaments, **it constitutes 20% of body weight.** Gender nuances reveal **the male skeleton's length and higher bone mass,** while **the female skeleton accommodates pregnancy with a broader pelvis.** Our body relies on this **interconnected system of long** and short bones for form and mobility, underscoring its indispensable role in preventing us from resembling **shapeless jellyfish.**



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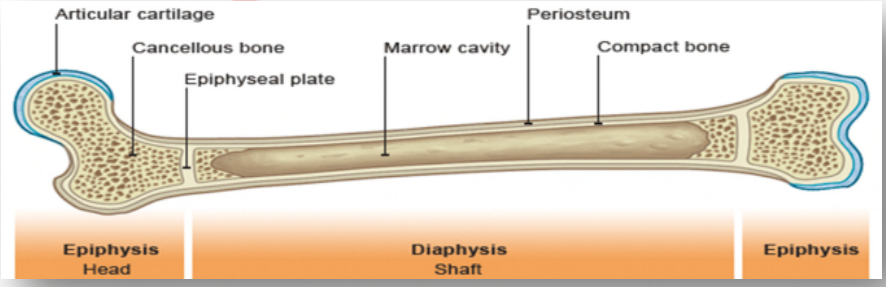
Memo to self:

Bone Anatomy

In the intricate world of the skeletal system, **bones serve as the sturdy pillars supporting our body structure.** Beyond mere structural support, they act as **guardians for vital organs** like the heart, brain, and lungs. **The bone marrow produces life-sustaining blood cells**, while **bones store essential minerals.** Despite their outer hardness, bones internally exhibit a softer nature, **constantly growing** and **reshaping in response to our activities.** In the symbiotic dance of life, some **yoga poses play a crucial role by ensuring a continuous flow of blood,** nutrients, and **energy to these dynamic and ever-changing living tissues.**

Types Of Bones

- ✓ **Long Bones,** Found in the limbs and digits.
- ✓ **Diaphysis,** or shaft is made up of thick, compact bone surrounding the hollow medullary cavity.
- ✓ **Epiphysis**, or expanded end is composed of spongy bone with thin layer of compact bone.
- ✓ **Articular cartilage** is a thin layer of hyaline cartilage covering the articulating surfaces.
- ✓ **Periosteum** is a fibrous membrane covering the entire bone to serve attachment site for muscles.
- ✓ Examples include femur, ulna, phalanges



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Memo to self:

Short Bones

- ✓ Approximately as wide as they are long
- ✓ Roughly **cubic shape decreases the potential for movement** between adjacent bones
- ✓ Examples are **tarsals and carpals**

Flat Bones

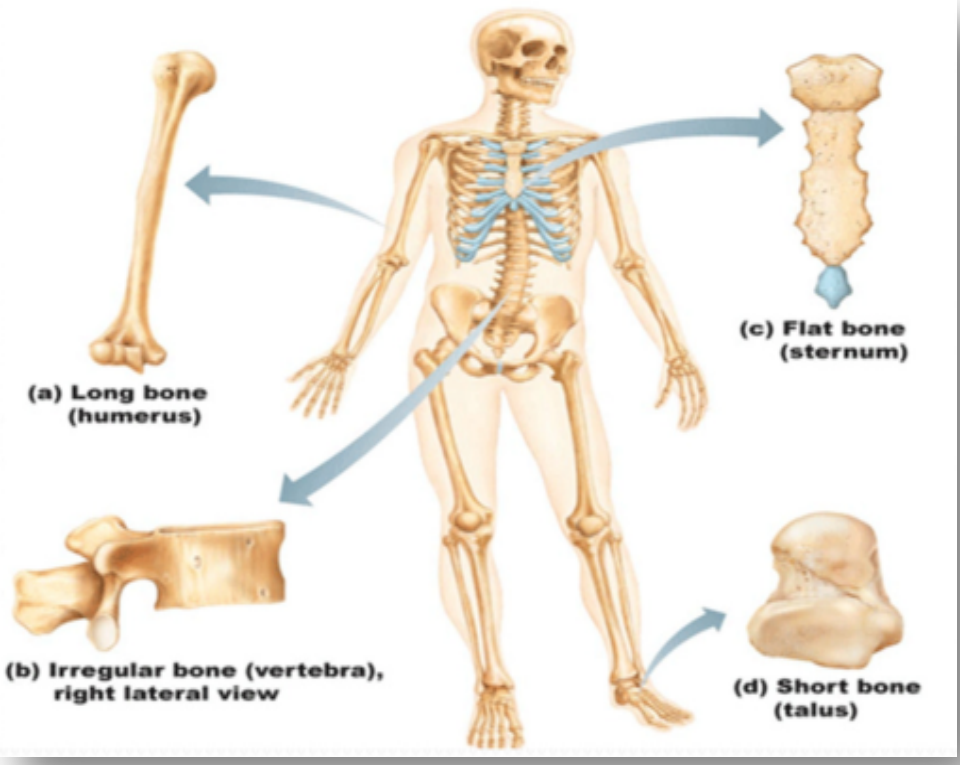
- ✓ Have a broad and flattened structure
- ✓ Serves **primarily as broad sites for muscle attachments**
- ✓ Examples are **ribs, iliac, scapulae**

Irregular Bones

- ✓ Irregularly shaped bones that **protect internal parts** and **support the body**
- ✓ Examples are **vertebrae, ischium**

Sesamoid Bones

- ✓ Bones that are **embedded within a tendon**
- ✓ The role is to **modify the way a tendon crosses a joint**
- ✓ Example is **patella**



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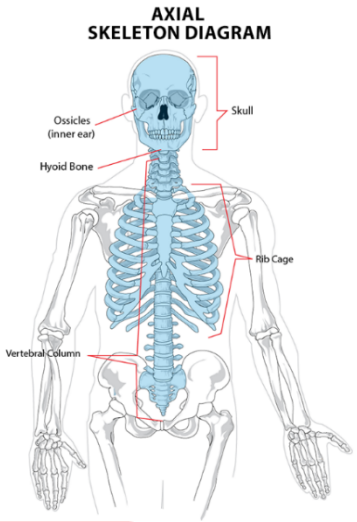
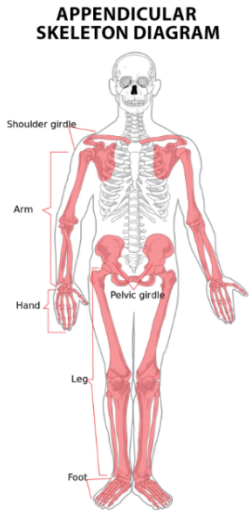
Memo to self:

Classification of Skeletal System

Dive into the **intricate study of the skeletal system,** which encompasses **the axial and appendicular components.**





1. Axial Skeleton Anatomy

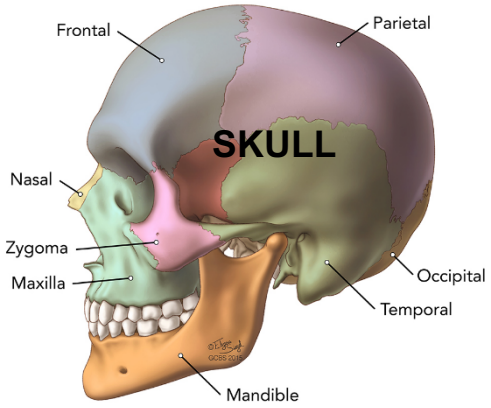
Regardless of age or gender, the axial skeleton, **comprising 80 bones**, forms the **body's vertical axis.** Explore the anatomy of **the head, neck, chest, and spine in this insightful classification of the skeletal structure.**

Skull Bone

Skull bones **sit on top of the vertebral column**

The adult skull comprises 22 bones,

these bones can be further **classified by location**



- ✓ Cranial bone: protect the brain
- ✓ Facial bone: found on the **front of the skull** and make up the face
- ✓ Vertebral column: made of **26 bones**, the first 24 are all vertebral followed by the **sacrum and the coccyx.**
- ✓ Cervical vertebrae: Explore the intricacies of the cervical spine, **consisting of seven vertebrae (C1 to C7)** from the base of **the skull** to the shoulders. These vertebrae collaborate with **muscles, tendons, ligaments**, and joints to offer **vital support**, structure, and flexibility to the neck. Notably, **C3 to C6 are termed typical vertebrae,** sharing fundamental characteristics with the rest of **the spinal vertebrae.**

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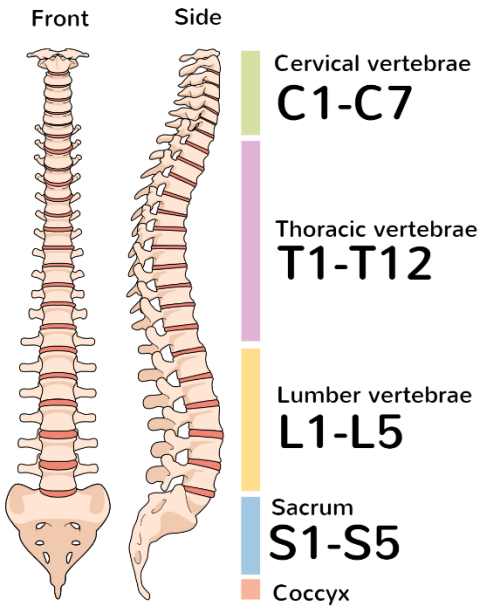

Explore the intricacies of the cervical spine, where the **C2 vertebra,** known as the axis, boasts a prominent odontoid process. Among the smallest in the cervical series, **C1 and C2 provide enhanced mobility**. Transition to the thoracic cage, consisting **of T1-T12, characterized by the sternum, ribs, and thoracic vertebrae**, influencing the neck's stability and flexibility.

- ✓ **Sternum:** The flat bone, beginning at the throat's base, extends midway through the chest's center.
- ✓ **Ribs:** Graceful arching **bones interconnect with the sternum in front** and **the thoracic vertebrae at the rear**, forming a protective embrace around the heart and lungs. **Despite their elegant curvature**, these bones allow for a restricted range of motion**, maintaining the vital organs' security within the ribcage.**

Lumbar (L1-L5)

The lumbar region, forming the lower part of the spine, gradually enlarges downward. As the largest and most **robust section,** it plays a **pivotal role in supporting weight.** **In the lumbar spine**, 5 intervertebral discs distribute load, **absorb shocks**, preserve **vertebral spacing during movement,** enhance spine flexibility, and maintain **lordotic curvature.** These **discs play a crucial role in supporting the spine's** structure, preventing excessive movements, and contributing to overall spinal health.

Sacral vertebrae (5) : Nestled at the spine's base, the sacrum, a triangular bone, channels body weight to the pelvis and legs.

Coccygeal vertebrae (4) : known as the tailbone, resides at the spine's base, comprising four vertebrae. Despite its strength, the column maintains flexibility, allowing rotation, bending, and lateral movement. It shifts forward when seated.

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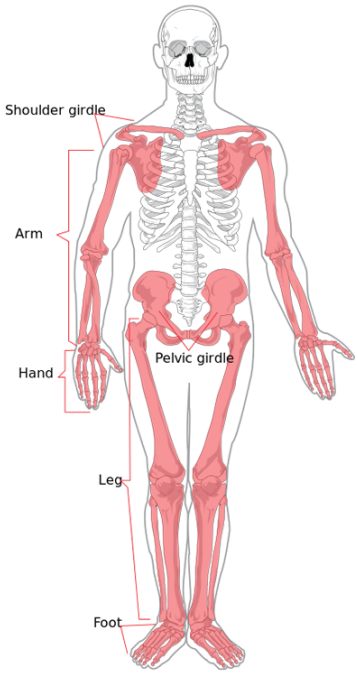
Memo to self:

Classification of Skeletal System Part 2

2. Appendicular Skeletal

Comprising **126 bones** encompassing the limbs and their connections to the axial skeleton. Uncover the **anatomy of the bones shaping the arms and legs**, unraveling the structural that form the **foundation of bodily movement**.



- ✓ **Pectoral Girdle**
  The pectoral girdle connects the arm to **the axial skeleton**, comprising the **clavicle and scapula. Each arm houses 30 humerus bones.**

- ✓ **Humerus**
  The humerus, **a lengthy upper-arm bone**, bridges the elbow and shoulder joints. **At the elbow**, **it links with the ulna,** much like the radial bone connects to the wrist. **At the shoulder**, the **humerus connects to the body frame** through the **glenoid fossa of the scapula.**

  The humerus, **a pivotal bone**, serves as a foundation for numerous muscle attachments, facilitating **essential arm functions through its connection** to the shoulder's rotational joint. **As one of the body's longest bones**, the humerus plays a **key role in supporting lifting** and various physical activities.

- ✓ **Radius**
  A major **forearm bone**, extends from the lateral **elbow to the thumb-side** wrist, running **parallel to the ulna.** Although the ulna is generally longer, the radius is thicker. Explore the intricate anatomy of the forearm, unraveling the nuanced relationships **between these essential skeletal components.**

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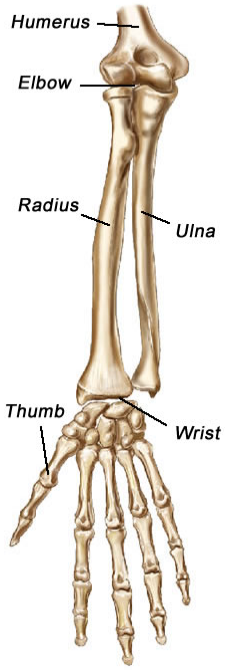
Memo to self:

The radius, **the longest toe bone**, shapes the elbow and wrist joints. It connects with **the humerus at the elbow and the ulna at the wrist**, contributing to upper limb articulation.



✓ **Ulna**

The ulna, a lengthy forearm bone **extending from elbow to pinky,** resides medially in **anatomical position**, running parallel to **the thicker radius**. While the ulna is generally longer, the radius, akin to **the largest toe**, **surpasses it in thickness.**

✓ **Carpals**

Within human anatomy, the carpals, **comprising 8 small bones**, form the intricate structure known as **the carpus, connecting hand to forearm.** The paramount role of the wrist lies in optimizing hand positioning, **enhancing movement freedom through the individual's** carpal bone mobility. **The term "carpus,"** rooted in Latin and Greek, directly **translates to "wrist."**

✓ **Metacarpals**

The metacarpals, **long bones in the hand**, connect **the carpals (wrist bones) to finger phalanges,** forming the metacarpus. **Identifiable on the back of your hand**, the five metacarpals include **Thumb, Index, Middle, Ring, and Small.** Commonly injured in car accidents and work-related incidents, repairing them aims to restore hand strength and **eliminate residual pain.**

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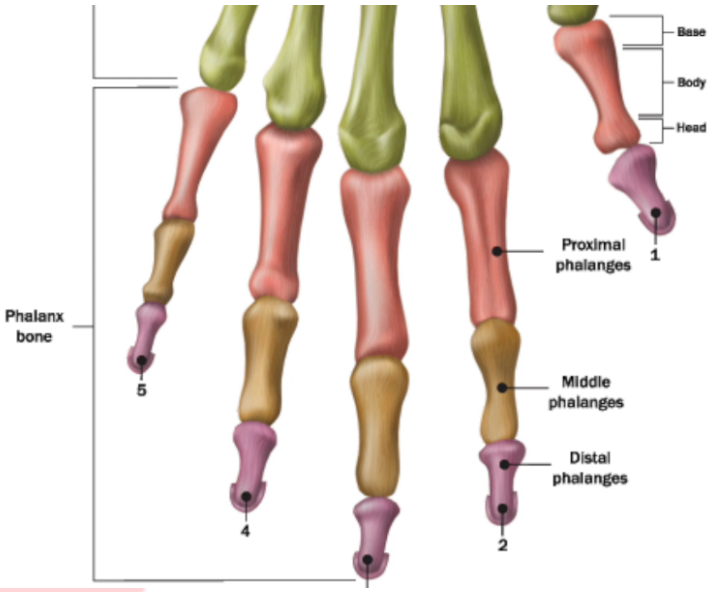
Memo to self:

The hand's phalanges, small yet classified as long bones due to structural features, **form the finger's bone structure**.



Each **hand houses 14 phalanges**, with three for the medial four digits (proximal, middle, and distal), and two for the thumb (proximal and distal). A universal labeling system assigns digits:

Thumb (1), Index finger (2), Middle finger (3), Ring finger (4), and Little finger (5).

- ✓ **Pelvic Girdle**

  The pelvis, a robust structure, plays a vital role in weight transfer from **the upper axial skeleton** to **the lower appendicular** components during movements. **Serving as the attachment point for muscles** and **ligaments, it safeguards the abdominal region.**

  Comprising the hip bones (ilium, ischium, pubis), the pelvic girdle supports leg attachment to the axial skeleton.

  Articulations like the sacroiliac joint, sacrococcygeal joint, and **pubic symphysis enhance its functional versatility.**

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Memo to self:

✓ **Femur**

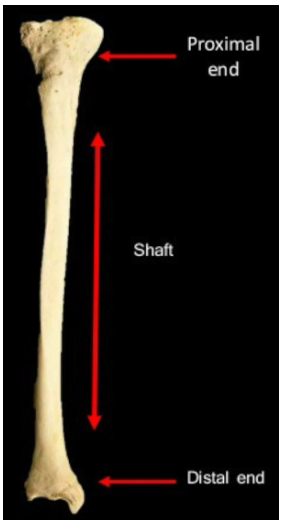
The femur, the body's longest and strongest bone, **withstands 1,800 to 2,500 pounds of force,** minimizing fracture risks. However, if fractured, healing **takes 3 to 6 months, highlighting its robust nature.**

✓ **Tibia**

The tibia is also known as shinbone

The tibia is the **second-largest bone in the body after the femur**, holds an intriguing etymology it derives from the Latin word "tubular," reminiscent of musical flutes sometimes crafted from animal tibia bones. **Beyond supporting body weight during walking, the tibia's length serves various purposes. It comprises 3 segments: proximal, shaft, and distal.**

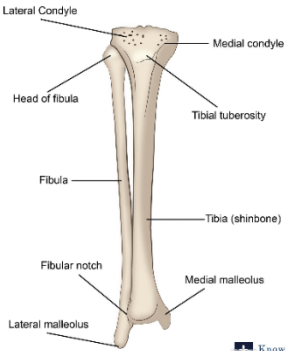
The **proximal section connects to the knee joint**, and **the distal part supports the ankle joint,** the **tibial shaft aids in attaching leg muscles.**



✓ **Fibula**

Explore the intricacies of the fibula, the slender lateral bone of the lower leg. **Aligned with the tibia, it offers vital support to lower leg muscles.**

Though similar in length, the fibula distinguishes itself with its notable slender form, complementing **the robust shinbone in this fascinating exploration of skeletal anatomy.**



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Memo to self:

✓ **Patella**

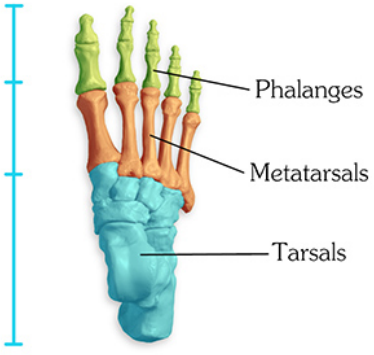
The patella, or kneecap, is a **small bone nestled between the femur and tibia, safeguarded by cartilage.** Essential for knee flexibility, any injury to its associated tendon **can impede walking, running, or athletic pursuits.** Such injuries are prevalent in athletes and highly active individuals, **risking damage to femur and tibia cartilage.**

✓ **Tarsals**

The intricate choreography of foot movement involves the pivotal tarsal bones, articulating gracefully with **the metatarsals and forming the foundation for the toe phalanges.** These seven ankle bones, connecting with the tibia and **fibula of the leg**, create a harmonious interplay, **essential for stability and mobility in every step.**

✓ **Metatarsals**

The metatarsals, **5 elongated foot bones** nestled between toe and **tarsal bones**, form a crucial arch-like structure for balance during standing and walking. **Each metatarsal connects to a toe**, collectively contributing to the intricate framework supporting our upright posture and **smooth ambulation.**



The toes consist of 14 bones, each featuring three phalanges proximal, intermediate, and **distal except the big toe**, which has 2. With this, we conclude our **exploration of the Skeletal System.** We sincerely hope you find it enjoyable.

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Memo to self:

"SURRENDER"

WHATEVER PRESENT LIFE MOMENT IS NOW
ACCEPT it as if you chose it
because your person that makes
your own choices in life don't
blame others for your ignorance.

Always "work with life facts" not against
them, make your current reality
your best friend.
Don't make facts your enemy.
Truth finds all sins don't risk suffering.

When you accept your "Now" you will
transform into a more complete
humble simple Spirit.

"AWARENESS"

MAKE SURE THAT YOU CARRY NO RESISTANCE

NO hatred, no negative energy Live to "Have no enemies"

Leaving un-resolved worries will only catch up with your past trail of sad destruction,

Turn bad energy into Positive.

Respect people's personal space and they will love you for who you are alone.