Experiential Anatomy: Moving from the Body Systems

This is a series of improvisational exercises that teaches basic anatomical principles and accesses different qualities of movement by thinking about their specific body systems.

Skeleton

Have students point to or name any bones that they might know and then begin to add to their comments. Depending on the level of the class and resources available you may show a picture of the skeleton. As you are talking, demonstrate by touching where these bones are in your own body and have the students do the same. Some key points to mention about the skeleton are:

- The skeleton is split into two sections the axial skeleton (head, spine, ribs, and pelvis) and the appendicular skeleton (arms and legs)
- Bones are heavy but most of them are also hollow
- There are many different shaped kinds of bones
    - Long bones like in your arms and legs
    - Small square bones in your hands and feet
    - Big flat bones like your skull, the back of your pelvis (illium), and shoulder blades
    - Oddly shaped bones like vertebrae
- Bones are connected to each other at the joints
    - Some joints can move in multiple directions (shoulder, hip, where the head meets the spine)
    - Some joints can only move in one direction (knees and elbows)

Once you've talked about some or all of these qualities of the skeleton have students get in lines on one side of the room. Play some music that is upbeat and has a rhythm and ask them to dance across the floor four or five at a time thinking about all of the ways their skeletons are able to move. Remind them which joints can move in multiple directions. Remind them that bones have weight. See if they can take these skeleton inspired movements up into the air or down into the floor.
Movement quality – loose, not super extended or contracted, minimal effort, linear and specific directionally

Muscle

Have students point to or name any muscles that they might know and then begin to add to their comments. Depending on the level of the class and resources available you may show a picture of some muscles. As you are talking, demonstrate by touching where these muscles are in your own body and have the students do the same. Some key points to mention about the muscles are:

- Some muscles are really big and you can see them in action (muscles of the arms and legs)
- Some muscles are really small and you can't see them from the outside of the body (all of the muscles of the face or between the ribs)
- Muscles are stretchy they can get really long (extension) or get really short (flexion)

Once you've talked about some or all of these qualities of the muscles have students get in lines on one side of the room. Play some music that is upbeat and has a rhythm and ask them to dance across the floor four or five at a time thinking about their muscles. Remind them that muscles are like rubber bands which can stretch really far and also get really short bringing your body parts close together. What is the difference between thinking and moving from about big muscles and little muscles?
Movement quality – more effortful than the skeleton, more carving and less linear shapes

Nerves

Ask students if they know anything about the nervous system and then begin to add to their comments. Depending on the level of the class and resources available you may show a picture of the nervous system. Some key points to mention about the nervous system are:

- The nervous system starts and the brain and radiates throughout the whole body
- The central part of the nervous system is in the spine and is called the spinal cord
- The rest of the nerves radiate from the spinal cord like roots of a tree
- The brain sends electrical impulses to the nerves to make your body move

Once you've talked about some or all of these qualities of the nervous system have students get in lines on one side of the room. Play some music that is upbeat and has a rhythm and ask them to dance across the floor four or five at a time thinking about their nerves. Electricity or the feeling of static shocks is a good image to access this body system.

Movement quality – sharp, quick interruptions

Organs

Have students point to or name any organs that they might know and then begin to add to their comments. Depending on the level of the class and resources available you may show a picture. Some key points to mention about the organs are:

- They are protected by your bones and your muscles
- They move around throughout the day and your life
- Some of them are muscles (heart, lungs, stomach, intestines) but you cannot control their movement, they move on their own
- They are connected by liquid and connective tissue

Once you've talked about some or all of these qualities of the organs have students get in lines on one side of the room. Play some music that is upbeat and has a rhythm and ask them to dance across the floor four or five at a time thinking about all their organs. Ask them to move how they imagine these organs they can't control move. Remind them of the watery connections between the organs to help them access more fluid quality of movement.

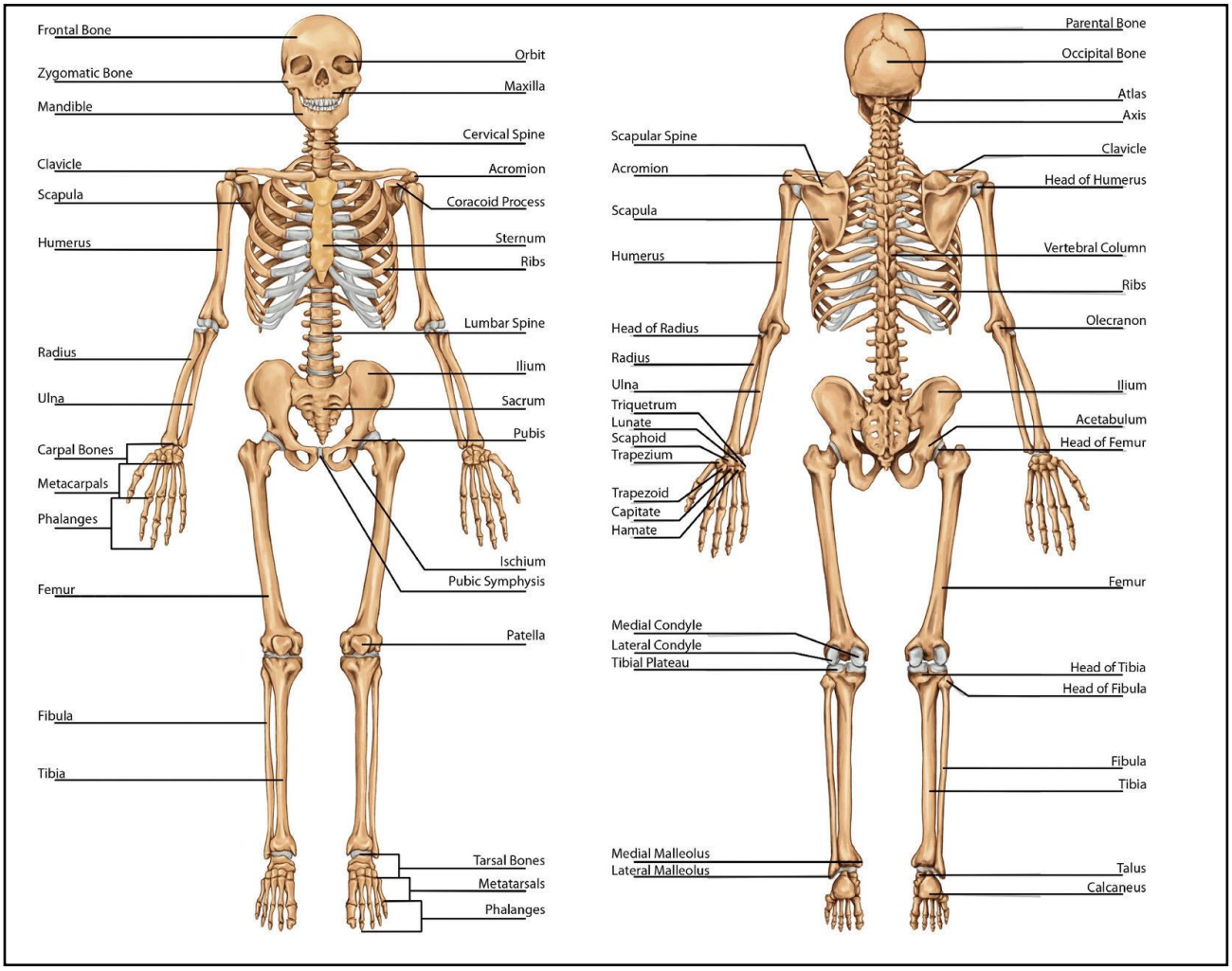
Movement quality – fluid, connected, soft

Notes

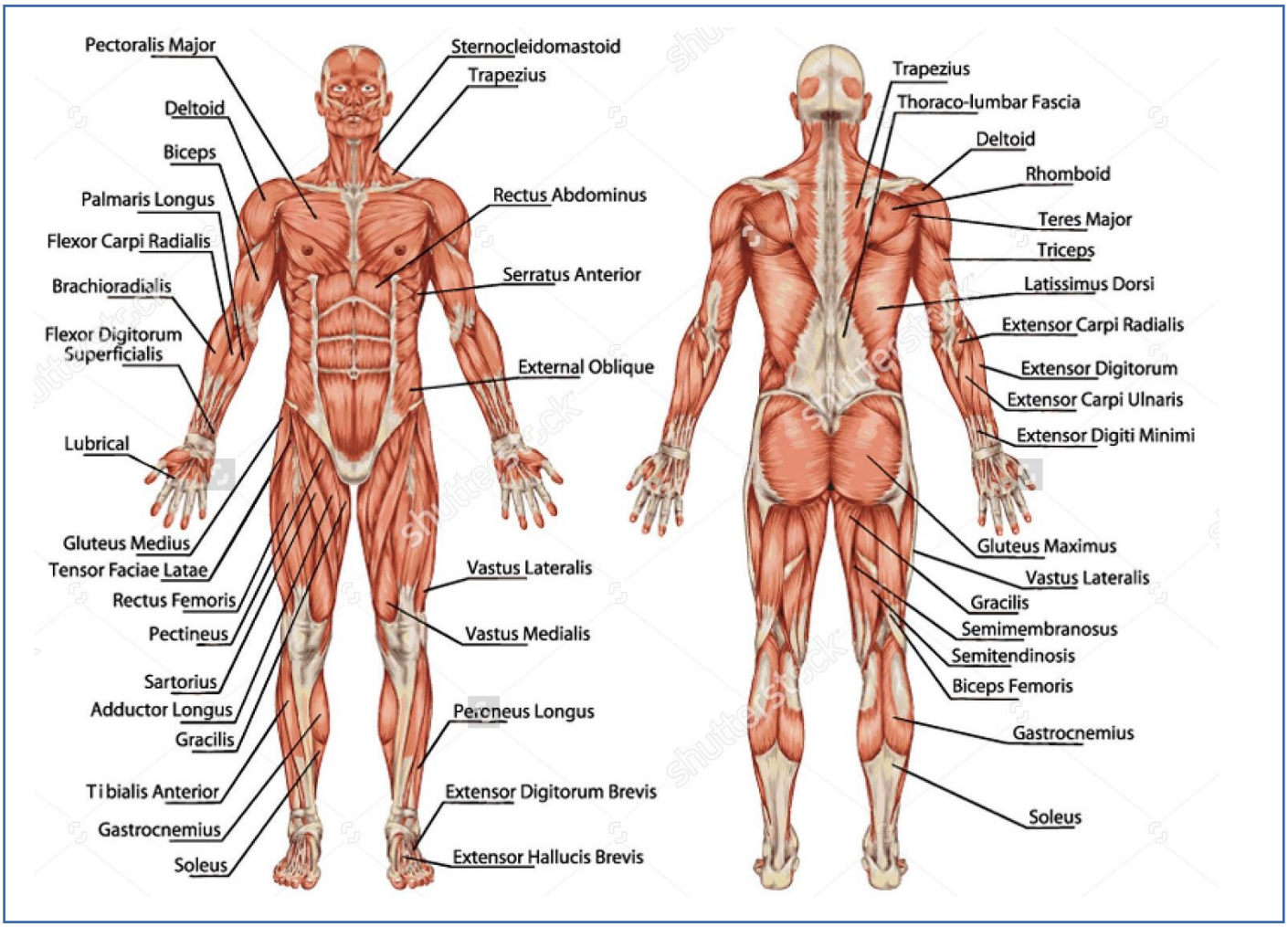
As students become comfortable with each of these systems they can start dancing with more than one in mind at a time or switching between them as you direct them to or as they wish depending on their level.

Some simple images for each body system can be found on the following pages. Feel free to use these or to find your own.

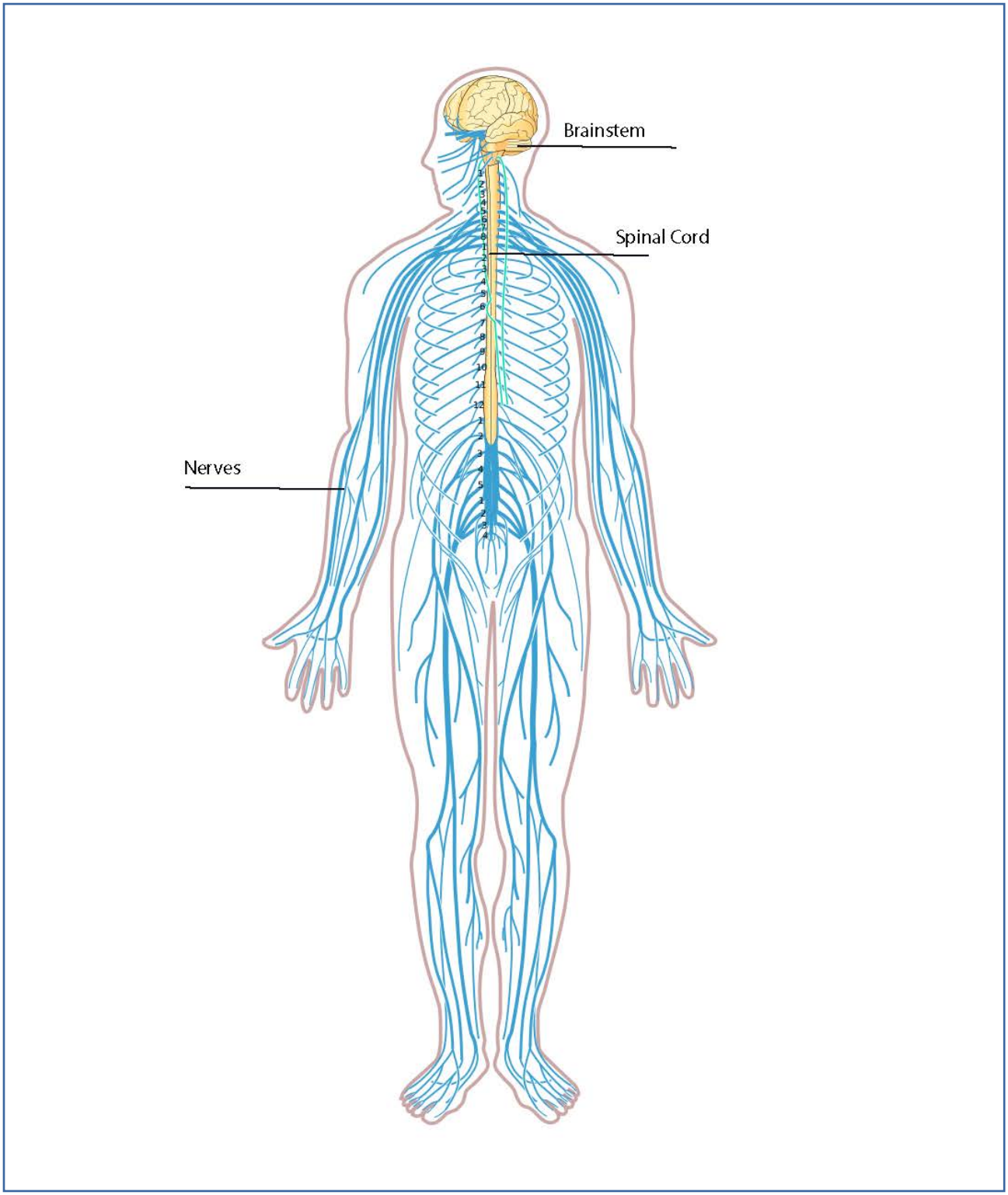
Skeleton


Frontal Bone
Zygomatic Bone
Mandible
Clavicle
Scapula
Humerus
Radius
Ulna
Carpal Bones
Metacarpals
Phalanges
Femur
Fibula
Tibia
Orbit
Maxilla
Cervical Spine
Acromion
Coracoid Process
Sternum
Ribs
Lumbar Spine
Ilium
Sacrum
Pubis
Ischium
Pubic Symphysis
Patella
Tarsal Bones
Metatarsals
Phalanges
Parental Bone
Occipital Bone
Atlas
Axis
Scapular Spine
Acromion
Scapula
Humerus
Head of Radius
Radius
Ulna
Triquetrum
Lunate
Scaphoid
Trapezium
Trapezoid
Capitate
Hamate
Medial Condyle
Lateral Condyle
Tibial Plateau
Medial Malleolus
Lateral Malleolus
Clavicle
Head of Humerus
Vertebral Column
Ribs
Olecranon
Ilium
Acetabulum
Head of Femur
Femur
Head of Tibia
Head of Fibula
Fibula
Tibia
Talus
Calcaneus

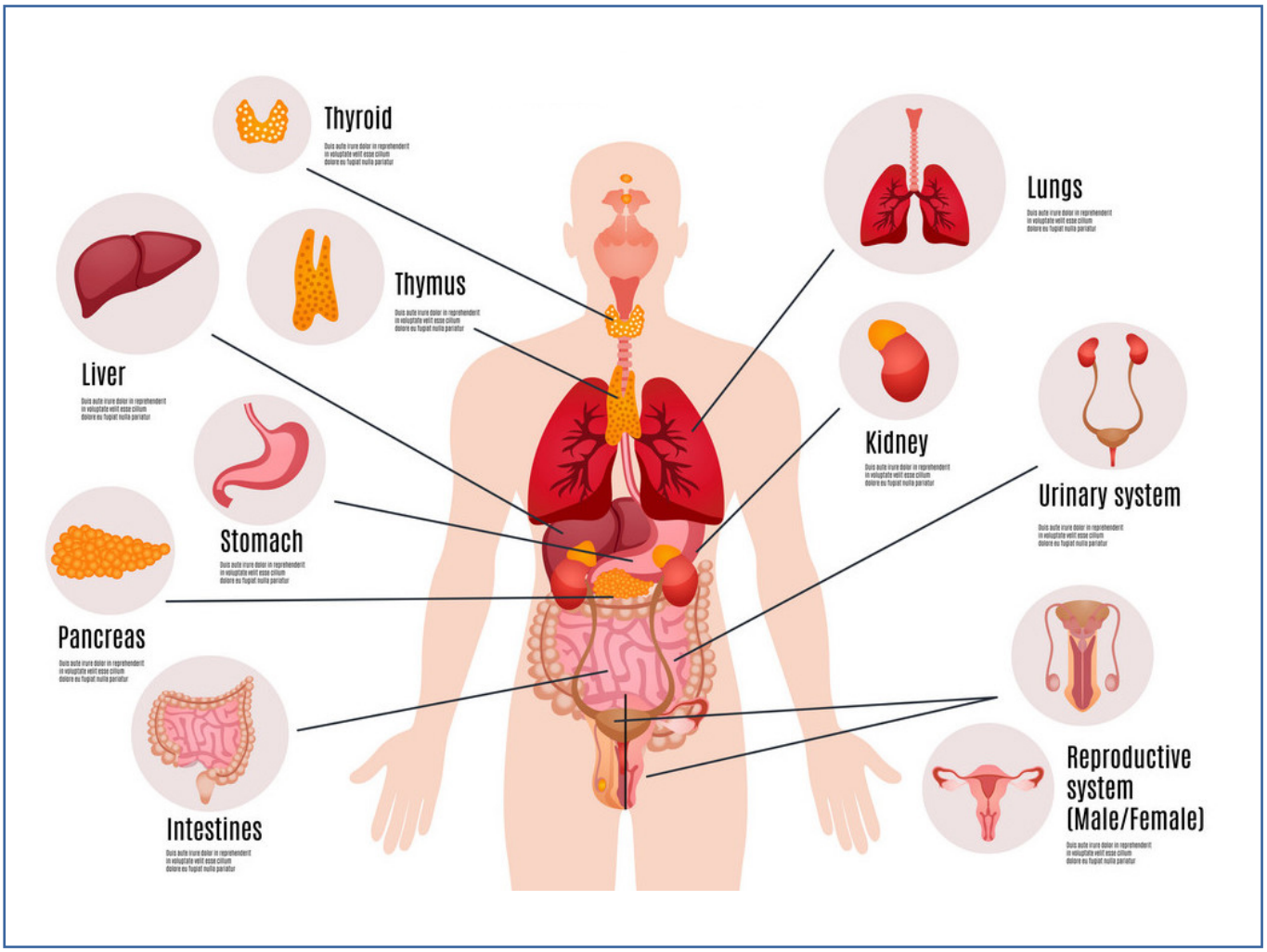
Muscles


Pectoralis Major
Sternocleidomastoid
Trapezius
Deltoid
Biceps
Palmaris Longus
Rectus Abdominus
Flexor Carpi Radialis
Serratus Anterior
Brachioradialis
Flexor Digitorum Superficialis
External Oblique
Lubrical
Gluteus Medius
Tensor Faciae Latae
Vastus Lateralis
Rectus Femoris
Vastus Medialis
Pectineus
Sartorius
Peroneus Longus
Adductor Longus
Gracilis
Extensor Digitorum Brevis
Tibialis Anterior
Gastrocnemius
Extensor Hallucis Brevis
Soleus
Trapezius
Thoraco-lumbar Fascia
Deltoid
Rhomboid
Teres Major
Triceps
Latissimus Dorsi
Extensor Carpi Radialis
Extensor Digitorum
Extensor Carpi Ulnaris
Extensor Digiti Minimi
Gluteus Maximus
Vastus Lateralis
Gracilis
Semimembranosus
Semitendinosis
Biceps Femoris
Gastrocnemius
Soleus

Nervous System



Organs


Thyroid
Lungs
Thymus
Liver
Kidney
Urinary system
Stomach
Pancreas
Intestines
Reproductive system (Male/Female)