

List for Histology Test

Tissue Type	Name of Slide
Epithelial Tissue:	
Simple Squamous	LUNG HJ1-22, HJ1-2
The walls of the lungs are made up of simple squamous tissue.	
Simple Cuboidal	SIMPLE CUBOIDAL, EPITHELIUM, CUBOIDAL
This tissues is found in the kidney. Look at pg 2 of your photograph book.	
Simple Columnar	AMPHIBIAN SIMPLE COLUMNAR H-185 (best) GOBLET CELLS EPITHELIUM 2255 (good) GOBLET CELLS W2253 (fair)
Notice the long columnar cells and the goblet cells.	
Pseudostratified Columnar	PSEUDOSTRATIFIED COLUMNAR HA 3-32 CILATED EPITHELIUM 93W 3034
This slide is from the trachea. The pseudostratified columnar is on the surface. Also find the cilia and goblet cells. This slide also has hyaline cartilage on it.	
Stratified Squamous	ESOPHAGUS H7875 31-5016 (don't look at the slide labeled stratified squamous)
This shows stratified squamous tissue at the top.	
Transitional	TRANSITIONAL EPITHELIUM H280, W3039, HA-5-1
Connective Tissue Proper:	
Loose CT	AREOLAR TISSUE #H570 31-2686
thin, dark strands are elastic proteins, faint pink are collagenous, fibroblasts-cells found in CT	
Adipose CT	ADIPOSE CT
Also note that adipose tissue is found on many other slides. Be able to recognize it on any slide.	
Reticular CT	LYMPH NODE, RETICULAR FIBERS 70191
On high power, the fibers stain blue.	
Dense Regular CT	COLLAGENOUS TISSUE H620, 93W3248
Fibroblasts, collage fibers	
Elastic CT	AORTA H1725, 93W6510
Fibroblasts, elastic fibers	
Dense Irregular CT	SCALP
The dense irregular tissue is in the dermis of skin.	
Cartilage: To find on all slides: chondrocytes, matrix, lacunae	
Hyaline Cartilage	HYALINE CARTILAGE
The hyaline cartilage is in the middle of the slide, the top surface is pseudostratified columnar.	

Elastic Cartilage CARTILAGE, ELASTIC 71941
The elastic cartilage is toward the bottom of the slide. This slide also shows stratified squamous at the top.

Fibrocartilage H710, 31-2922, 93W3279
(don't look at 7-14)
The entire slide is fibrocartilage.

Compact Bone HUMAN GROUND BONE 93W6140
Haversian (central) Canal Volkman's (perforating) Canal
lamella canaliculi osteocyte lacuna

Spongy Bone Cancellous Bone WL71845
Fibrocartilage 7-14
Even though this slide is labeled fibrocartilage, it shows also shows spongy bone. This is taken from the symphysis pubis. There are 2 bones that meet in the center of the slide. Find the spongy bone portion of these bones. This slide also shows muscle, cartilage and adipose tissue.
spongy bone osteocyte red bone marrow

Blood BLOOD SMEAR
Red blood cells white blood cells

Skin: Epidermis SCALP (caucasian 71121& negroid 71122)
Be able to find the following layers of the epidermis and structures in the dermis.
stratum basale stratum spinosum stratum granulosum
stratum corneum dermis hair follicle
sebaceous gland arrector pili muscle – tends to be better on negroid scalp slides

sudoriferous glands SWEAT GLANDS
stratum lucidum PLANTAR SKIN

Muscle
skeletal muscle 71301
cardiac muscle (intercalated discs)
smooth muscle (involuntary muscle) - forms the wall of small intestines, looks like a tube

BONES, MARKINGS AND SPECIAL FEATURES

AXIAL SKELETON

Cranium (8 bones)

Frontal (1)

frontal sinuses

Parietal (2)

Occipital (1)

foramen magnum

occipital condyles

occipital protuberance

Temporal bones (2)

squamous part

mastoid part

mandibular fossa

external acoustic meatus

petrous portion

zygomatic process

mastoid process

styloid process

internal acoustic meatus

carotid foramen

jugular foramen

Sphenoid (1)

sphenoidal sinuses

lesser wings

pterygoid processes

sella turcica

optic foramen

greater wings

foramen ovale

Ethmoid (1)

ethmoidal sinuses or air cells

crista galli

perpendicular plate

superior nasal concha

cribriform plate

middle nasal concha

Inferior Nasal concha

Face (14 bones)

Nasal (2)

Maxilla (2)

maxillary sinus

alveolar process

palatine process

Palatine (2)

Zygomatic bones (2)

temporal process

Mandible (1)

body

condyloid process

mental foramen

rami (ramus)

coronoid process

mandibular foramen

angle

alveolar process

Lacrimal bones (2)

Vomer

Ear Bones (6 bones) STUDY LATER WITH EAR

Hyoid Bone (1 bone)

SPECIAL SKULL FEATURES

Sutures

sagittal

lambdoid

coronal

squamous

Fontanel (fetus and infant)

anterior	sphenoid	posterior	mastoid
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Sinuses

paranasal - frontal	ethmoid	sphenoid	maxillary
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Wormian or Sutural bones - found in lambdoid or sagittal sutures

Zygomatic Arch

Lacrimal Canal (for nasolacrimal duct)

Orbits-Formed by:

frontal	ethmoid	sphenoid	lacrimal
maxilla	zygomatic		

Nasal Septum-Formed by:

vomer	perpendicular plate of ethmoid	cartilage
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Hard Palate-Formed by:

palatine	palatine process of maxilla
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VERTEBRAL COLUMN (26 bones)

Named according to 4 regions and numbered

Cervical region - 7 vertebrae

C-1 or Atlas; C-2 or Axis (dens); C-3-C-7

Thoracic region - 12 vertebrae

T-1 through T-12

Lumbar region - 5 vertebrae

L-1 through L-5

Pelvic region - 2 vertebrae

Sacrum (fused from fetal S-1 through S-5)

Coccyx (fused from fetal Co-1 through Co-3 or Co-4)

Regions have curvatures

Primary Curve: thoracic and pelvic

Secondary Curves: cervical and lumbar

Abnormal curves: kyphosis (exaggerated thoracic curve-hunchback)

lordosis (exaggerated lumbar curve - swayback)

scoliosis (lateral curvature)

Parts of Single Vertebra

Body

vertebral arch

vertebral foramen - hole surrounded by neural arch and posterior portion of body

Processes

transverse process - extend laterally from neural arch

spinous process - extends posteriorly from midline of neural arch;

superior articulating processes

inferior articulating processes

Intervertebral foramen - space between vertebrae - spinal nerves exit

Spinal Canal - canal made by all vertebral foramina when vertebral column is articulated -

spinal cord runs through this canal

Characteristics of regional vertebrae

Cervical

1st - atlas - missing a body

2nd - axis - has dens

Transverse foramen in transverse process - for vertebral artery

Thoracic

Facets for ribs on body and transverse process

Long spinous process

Lumbar

Large body

Short and rectangular spinous process

Sacral

STERNUM (1 bone)

body, manubrium - articulates with clavicle xiphoid process

RIBS - 24 bones, 12 on each side

Ribs are divided into groups:

"true ribs" - articulate with sternum; 1 - 7

"false ribs" - articulate with cartilage of rib above 8-10

"floating" - no anterior articulation 11 - 12

PARTS OF A RIB

head

tubercle

APPENDICULAR SKELETON - 126 BONES

PECTORAL GIRDLE

Clavicle

Scapula

superior border
glenoid cavity
supraspinous fossa

medial border
spine
infraspinous fossa

lateral border
acromion
coracoid process

FORELIMB

Humerus

head
deltoid tuberosity
capitulum
lateral epicondyle

greater tubercle
coronoid fossa
trochlea
medial epicondyle

lesser tubercle
radial fossa
olecranon fossa

Ulna

olecranon process
radial notch

trochlear notch
head

coronoid process
styloid process

Radius

head

styloid process

Carpals - 8 bones

trapezium	trapezoid	capitate	hamate
scaphoid (navicular)	lunate	triquetrum	pisiform

Metacarpals - numbered 1 (thumb) - 5

Phalanges (proximal, middle, distal of digits 1 - 5)

PELVIC GIRDLE Os Coxae, composed of:

Ilium

iliac crest	anterior superior iliac spine
anterior inferior iliac spine	greater sciatic notch
iliosacral articulating space - sacroiliac joint	

Ischium

ischial tuberosity	ischial ramus
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Pubis

Superior pubic ramus	inferior pubic ramus	pubic crest
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Special Features of Pelvic Girdle

True & false pelvis	pelvic inlet (brim) & outlet	acetabulum
obturator foramen	symphysis pubis	pubic arch (angle)
male/female differences		

HIND LIMB

Femur

head and neck	greater & lesser trochanter	linea aspera
lateral and medial condyle	intercondylar fossa	

Patella - a sesamoid bone

Tibia

Lateral & medial condyle anterior crest medial malleolus

Fibula

lateral malleolus

Tarsals - 7 bones

talus calcaneus navicular

cuneiforms 1 - 3 cuboid

Metatarsals numbered 1 - 5

Phalanges

proximal, middle, distal of digits numbered 1 - 5

Also:

1. Define sesamoid bone and name a sesamoid bone that is considered a bone of the body.
2. List some major male/female skeletal differences.

Cat Muscles

First of all – carefully read how to skin the cat on page 176. Your book gives you lots of hints on how to dissect your cat correctly.

Cutaneous Muscles pg 178

cutaneous maximus

Pectoralis Muscles pg 178-179 (picture)

Pectoantebrachialis – do not transect

pectoralis major

pectoralis minor

xiphohumeralis

Muscles of the Back Group pg 178, 180 (picture)

clavotrapezius

acromiotrapezius

spinotrapezius

clavodeltoid

acromiodeltoid

spinodeltoid

latissimus dorsi

levator scapulae ventralis

Forelimb Muscles pg 179 pictures on pages 192, 181

epitrochlearis

biceps brachii

triceps brachii – long head and lateral head

Muscles of the Hip and Thigh, directions on page 203, pictures on page 205, 206

Medial Muscles

sartorius bisect after isolating

gracilis - bisect after isolating

Under the gracilis: adductor longus
adductor femoris
semimembranosus

Under the sartorius: vastus lateralis
rectus femoris
vastus medialis

Lateral Muscles

tensor fascia latae

gluteus medius

gluteus maximus

caudofemoralis

biceps femoris

semitendinosus

Muscles of Lower Leg directions on page 216, pictures on pg 217

gastrocnemius
soleus
calcaneal tendon
tibialis anterior

Muscles of the Head and Neck pg 229

sternomastoid

Trunk Muscles directions on page 239, pictures on page 239

external oblique internal oblique rectus abdominis
linea alba (CT)

serratus ventralis

external intercostals - look on previously dissected cat

internal intercostals - look on previously dissected cat

diaphragm - look on previously dissected cat

scalenus – This is not labeled on figure 18.7, pg 240. You need to label it yourself. It is found just above the serratus ventralis. Ask if you are not sure which one it is.

Human Muscle part of Laboratory Test

Be able to identify the following muscles on diagrams, on models or by description of action. Know all names and actions. Know which muscles oppose each other (are antagonistic). Know the definition of origin and insertion (pg 328). You do not need to know the exact insertion and origin, but use this information while you are studying.

Expression and Mastication Muscles

Frontalis

Orbicularis oculi

Orbicularis oris

Zygomaticus major and minor

Buccinator

Platysma

Masseter

Move Head

Sternocleidomastoid

Trapezius

Part of erector spinae muscle

Move Chest Wall

Diaphragm

External intercostals

Internal intercostals

Move Abdominal Wall

Rectus abdominis

External oblique

Internal oblique

Transversus abdominis

Linea Alba

Move Vertebral Column

Erector spinae
Rectus abdominis

Muscles of Pelvic Diaphragm

Levator ani
Coccygeus

Inguinal ligament
Inguinal Canal & Rings
Hernia – inguinal, hiatal, umbilical

Muscles Acting on the Scapula

Pectoralis minor
Serratus anterior
Trapezius

Move Humerus

Pectoralis major
Deltoid
Latissimus dorsi

Rotator Cuff Muscles

Infraspinatus
Supraspinatus
Teres Major
Teres Minor

Move the Lower Arm

Biceps brachii
Brachialis
Brachioradialis
Triceps brachii

Move Wrist & Fingers

Flexor carpi radialis
Flexor carpi ulnaris
Palmaris longus
Extensor carpi ulnaris
Extensor digitorum

Muscles Acting on the Femur

Iliopsoas (iliacus & psoas major)
Gluteus maximus
Gluteus medius
Tensor fasciae latae
Iliotibial Band
Adductor Group
 Adductor longus
 Adductor magnus

Move the Lower Leg

Gracilis

Quadriceps Group

Rectus femoris

Vastus lateralis

Vastus medialis

Vastus intermedius

Sartorius

Hamstrings Group

Biceps femoris

Semimembranosus

Semitendinosus

Femoral Rings – pg 43.

Move Foot

Tibialis anterior

Gastrocnemius & Calcaneal tendon

Soleus