SECTION 4  SKELETAL SYSTEM

Bones, cartilage, and joints make up the skeletal system. Bones form the framework that supports and protects the internal organs. Cartilage is a form of connective tissue that is more elastic than bone and is found in areas of the body where flexibility is needed, such as the ear lobe and the outer nose. Joints, with the help of muscles, make the many body movements possible.

Word Elements  (We will first look at some of the word elements that might be used in this system. Listen as each word element is being pronounced. Practice these word elements several times before going on to the next section.)

ab- means away from
ab

ad- means toward, adherence
ad

-algia (a l’ je a) means pain
algia

arthr/o (a r’ thro) means joint
arthro

articulo (a r t i k u lo) means joint or junction
articulo
burs/o (bùr so) means sac of fluid
burso

carp/o (kàr po) means wrist
carpo

caud/o (kaw do) means tail or lower part of the body
caudo

-centesis (sen te’ si’s) means surgical puncture with a needle to remove fluid
centesis

cephal/o (sef a lo) means head
cephalo

cervic/o (ser vi ko) means neck (cervix)
cervico

cheir/o (ki ro) means hand
cheiro

chondr/o (kön drō) means cartilage (a form of connective tissue that is more flexible than bone)
chondro
cleid/o (kli_dɔ) means collarbone, which is called the clavicle

cost/o (kɔs tɔ) means rib

dactyl/o (dæk ti_lɔ) means fingers or toes

diat/o (dɪ j ɪ to) means fingers or toes

dynam/o (dɪ na mo) means power

ectomy (ɛk’ ɪ to me) means surgical removal
epi- (ep i) means over or upon
epi

ethm/o (eth mo) means sieve
ethmo

fasci/o (fash e o) means sheet, band, fascia or fibrous band
fascio

fibr/o (fibro) means fiber
fibro

-graphy (graf e) means procedure of recording or writing
graphy

hemi- (hem e) means half
hemi

-iatry (iatre) means the study of
iatry
ili/o (i_l e o_) means ilium or hip bone. This is not to be confused with ileo (pronounced the same way but spelled ileo) which is the word element for the ileum, spelled ileum, the last and longest part of the small intestine

ilio

inter- (i_n ter) means between

inter

ischi/o (i_s ke o) means the lower portion of the hip bone, called the ischium

ischio

-itis (i ’ ti_s) means inflammation

itis

lumb/o (lum bo) means lower back

lumbo

-malacia (ma la she a) means abnormal softening

malacia

maxill/o (mak si_lo) means upper jaw bone, called the maxilla

maxillo

meta- (mēt’a) means after, behind, over, change
meta

myel/o (mi el o) means bone marrow or spinal cord
myelo

-odynia (o di n’ e a) means pain
odynia

-oido (oyd o) means like or resembling
oido

-oma (o ma) means tumor or neoplasm
oma

-osis (o si s) means condition
osis

oste/o (os te o) means bone
osteо

pariet/o (pa ri e to) means wall
parieto

ped/o (pe do, ped o) means foot or child
-plasty (plas te) means surgical correction or surgical repair

plasty

pod/o (pod o) means foot

podo

porosis (po ro’ si s) means a condition of becoming porus

porosis

sacr/o (sa’ kro) means sacrum, which is the next to the last part of the lower spine; this word element is very similar to another word element, sarc/o (sa r ko), which means flesh. Be careful not to confuse these two root words.
sacro

scoli/o (sko le o) means twisted, crooked, curved

scolio

-scopy (sko pe) means the procedure to view or look

scopy

sphen/o (sf e no) means wedge

spheno
spondyl/o (spɔn dʒi lɔ) means vertebra. Remember vertebra, spelled vertebra, is singular.

Vertebrae, spelled vertebrae, is plural.

spondylo

stern/o (ster no) means sternum, which is located in the center of the chest and is more commonly called the breast bone

sterno

synov/o (si n o vo) means synovial membrane

synovo

tars/o (tar so) means ankle, instep, or edge of eyelid

tarso

tend/o (ten do), ten/o (ten o) attaches muscle to bone or the tendon

tendo, teno

therap/o (ther’ a po) means treatment

therapo

therm/o (ther mo) means heat

thermo
thorac/o (thɔ ra kɔ) means chest

thoraco

traumat/o (trɔ ma to) means wound or injury

traumato

-trophy (trɔ fe) means growth or nourishment

trophy

vertebr/o (ver te bro) means vertebra

vertebro

Skeletal System Words

abduction (ab duk’ shən) is moving away from the source

ab- means away from

abduction

adduction (ə duk’ shən) is moving toward the source

ad- means near, toward

adduction

appendicular skeleton (ə p’ ɛn dɪ k’ ə lər) consists of the upper and lower extremities, including the pelvic and shoulder girdles (126 bones total)

appendicular skeleton
arthritis (ərˈθrɪtɪs) means inflammation of joint(s)

arthr/o means joint

-itis means inflammation

arthritis

arthrocentesis (ərˈθrɔsɛnˈteɪsɪs) is the surgical puncture of a joint with a needle to remove fluid for analysis

arthr/o means joint

-centesis means surgical puncture with a needle

arthrocentesis

arthrography (ərˈθrɒɡrəfeɪ) is the radiographic examination of a joint

arthr/o means joint

-graphy means the procedure of recording or writing

arthrography

arthroplasty (ərˈθrɒpləˈsteɪ) is the surgical repair of a damaged joint

arthr/o means joint

-plasty means surgical repair or surgical correction

arthroplasty

arthroscopy (ərˈθrɔsəˈkoʊpi) is the visual examination of the internal structure of a joint

arthr/o means joint
-scopy is the procedure to view or look

arthroscopy

articulation (är tīˈkər əl shən) is another name for a joint or a connection between bones

articul/o means joint or junction

articulation

axial skeleton (akˈsēəl) consists of skull, spinal column, ribs and sternum (80 bones total)

axial skeleton

bursitis (búr siˈtis) means inflammation of a bursa

burs/o means bursa

-itis means inflammation

bursitis

carpals (karˈpalz) are the bones of the wrist

carp/o means wrist

carpals

cervical vertebrae (serˈvi kal ˈvər te brē) are the first seven vertebrae that form the neck

cervic/o means neck

vertebr/o means vertebra

cervical vertebrae
chondromalacia (kon dro mal a’ she a) means abnormal softening of cartilage

chondr/o means cartilage

-malacia means abnormal softening

chondromalacia

clavicle (klav’ i k’l) connects the sternum to the scapula. It is better known as the collarbone.

clavicle

coccyx (kok’ siks) —also called the tailbone--is composed of four small fused vertebrae

coccyx

cranium (kra’ ne um) is the portion of the skull that contains the brain

 crani/o means skull

cranium

dactylitis (dak’ til i tis) means inflammation of the bones of the fingers and toes

 dactyl/o means fingers or toes

-itis means inflammation

dactylitis

diaphysis (di af i sis) is the shaft or middle part of long bones

 dia- means through

diaphysis
epiphysis (ep if i sis) is the wide end of a long bone covered with articular cartilage

    epi- means over, upon

epiphysis

ethmoid bone (eth’ moyd) forms part of the nose, orbit (eye), and floor of the cranium

    ethm/o means sieve
    -oid means like or resembling

ethmoid bone

fibula (fib’ u la) is the smaller of the two bones in the lower leg

fibula

fontanelle (fon” ta nel’) is a soft spot on a baby’s head where sutures have not yet closed

fontanelle

frontal bone forms the forehead

frontal bone

humerus (hu’ mer us) is the long bone in the upper arm

humerus

ilium (il’ e um) is one of the bones of each half of the pelvis

    ili/o means ilium, which is part of the hip bone

ilium
intercostal (in ter cos’tal) means between the ribs

   inter- means between

   -costal means referring to ribs

intercostal

ischium (is’ ke um) is the lower and posterior portion of the pelvic girdle

   ischi/o means lower portion of the hip bone

ischium

ligament means the fibrous bands of connective tissue that connect one bone to another

bone

ligament

lumbago (lum ba’ go) means pain in the lumbar region or lower back

   lumb/o means lower back

lumbago

lumbar vertebrae (lum’ bar ver’ te bre) are the third set of five vertebrae

   lumb/o means lower back

lumbar vertebrae

mandible (man’ di bl) is the lower jaw bone. It is the only movable bone of the skull.

mandible
manipulation is the attempted reduction or realignment of a bone involved in a fracture or joint dislocation.

maxillary bone (mak’ si ler” e) is the upper jaw bone

maxill/o is the upper jaw bone

maxillary bone

metacarpals (met” a kar’ palz) are the bones of the palms of the hands

meta- means after, beyond, over

carp/o means wrist

metacarpals

metatarsals (met” a tar’ salz) are the bones of the foot

meta- means after, beyond, over

tars/o means foot

metatarsals

myeloma (mi e lo’ ma) is a tumor made up of cells from bone marrow tissue

myel/o means bone marrow or spinal cord

-oma means tumor

myeloma
occipital bone (ok sip’ i tal) forms the posterior floor and walls of the cranium

occipital bone

ostealgia (os’ te al je a) means pain within a bone

    oste/o means bone

    -algia means pain

ostealgia

osteoarthritis (os” te o ar thri’ tis) means inflammation of a joint

    oste/o means bone

    arthr/o means joint

    -itis means inflammation

osteoarthritis

osteoporosis (os” te o por o’ sis) is the loss of bone density and increase in bone porosity

    oste/o means bone

    -porosis is a condition of becoming porus

osteoporosis

parietal bone (pa ri’ e tal) forms the roof and upper sides of the cranium

    pariet/o means wall

    -al means connection with

parietal bone
phalanges (fa lan’ jez) are the bones of the fingers and toes

podiatry (po di’ a tre) is the diagnosis, treatment, and prevention of conditions of the human feet

pod/o means foot

-iatry means the study of

prosthesis (pros’ the sis) means replacement part or implant

radius (ra’ de us) is one of two bones in the lower arm; this bone is in line with the thumb

sacrum (sa’ krum) is the curved, triangular-shaped bones between the lumbar vertebrae and the coccyx

sacr/o means sacrum

scapula (skap’ u la) is the shoulder blade

scoliosis (sko’ le o’ sis) means an abnormal sideways curve of the spine
scoli/o means crooked or curved

-osis is a condition

scoliosis

sphenoid bone (sfe’ noyd) forms part of the base of the skull and parts of the floor and side of the bony socket that protects and surrounds the eyeball

sphen/o means wedge

-oid means like or resembling

sphenoid bone

suture is a type of joint that is a jagged line where bones join and form a joint that does not move

suture

synovectomy (sin” o vek’ to me) means the surgical removal of a synovial membrane from a joint

synov/o refers to the synovial membrane

-ectomy means surgical removal

synovectomy

synovial joints (sin o’ ve al) are the movable joints in the body

synovial joints

tarsals (tar’ salz) are the bones of the ankle
tars/o means ankle or instep

tarsals

temporal bones form the side and base of the cranium

temporal bones

tendon attaches muscle to bone

tend/o means attaches muscle to bone

tendon

thoracic vertebrae (tho ras’ ik ver’ te bre) are the second set of 12 vertebrae that form the posterior wall of the chest

thorac/o means chest

vertebr/o means vertebra

thoracic vertebrae

tibia (tib’ e a) is the larger of the two bones in the lower leg; also known as the shin bone

tibia

ulna (ul’ na) is the larger of the two bones found in the lower arm

ulna

zygomatic bones (zi” go mat’ ik) are referred to as the cheekbones

zygomatic bones
This ends the section on the Skeletal System. If you have any questions, please ask your instructor for further clarification or refer to your textbook. You should repeat this section as many times as you feel is necessary to feel comfortable with the meaning and pronunciation of the words presented.