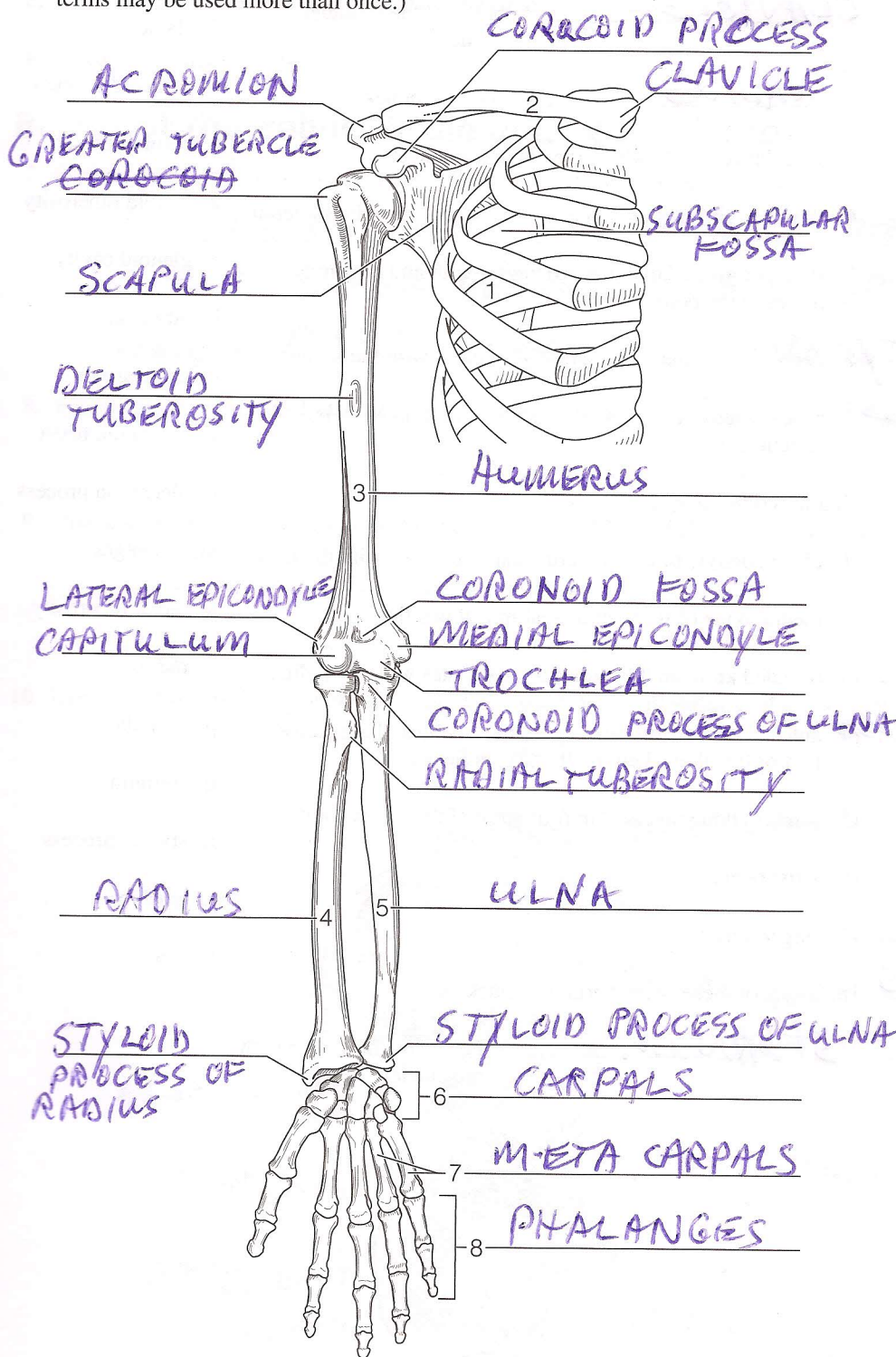


The Appendicular Skeleton

Bones of the Pectoral Girdle and Upper Limb

1. Match the bone names or markings in the key with the leader lines in the figure. The bones are numbered 1-8. (Some terms may be used more than once.)



Key:

- acromion
- capitulum
- carpals
- clavicle
- coracoid process
- coronoid fossa
- coronoid process of ulna
- deltoid tuberosity
- greater tubercle
- humerus
- lateral epicondyle
- medial epicondyle
- metacarpals
- phalanges
- radial tuberosity
- radius
- scapula
- styloid process
- subscapular fossa
- trochlea
- ulna

2. Match the bone names or markings in column B with the descriptions in column A. (Some terms may be used more than once.)

Column A	Column B
<u>DELTOID TUBEROSITY</u> 1. raised area on lateral surface of humerus to which deltoid muscle attaches	a. acromion
<u>HUMERUS</u> 2. arm bone	b. capitulum
<u>SCAPULA</u> , <u>CLAVICLE</u> 3. bones of the shoulder girdle	c. carpals
<u>ULNA</u> , <u>RADIUS</u> 4. forearm bones	d. clavicle
<u>ACROMION</u> 5. scapular region to which the clavicle connects	e. coracoid process
<u>SCAPULA</u> 6. shoulder girdle bone that is unattached to the axial skeleton	f. coronoid fossa
<u>CLAVICLE</u> 7. shoulder girdle bone that articulates with and transmits forces to the bony thorax	g. deltoid tuberosity
<u>GLENOID CAVITY</u> 8. depression in the scapula that articulates with the humerus	h. glenoid cavity
<u>CORACOID PROCESS</u> 9. process above the glenoid cavity that permits muscle attachment	i. humerus
<u>CLAVICLE</u> 10. the "collarbone"	j. metacarpals
<u>TROCHLEA</u> 11. distal condyle of the humerus that articulates with the ulna	k. olecranon fossa
<u>ULNA</u> 12. medial bone of forearm in anatomical position	l. olecranon process
<u>CAPITULUM</u> 13. rounded knob on the humerus; articulates with the radius	m. phalanges
<u>CORONOID FOSSA</u> 14. anterior depression, superior to the trochlea, that receives part of the ulna when the forearm is flexed	n. radial tuberosity
<u>ULNA</u> 15. forearm bone involved in formation of the elbow joint	o. radius
<u>CARPALS</u> 16. wrist bones	p. scapula
<u>PHALANGES</u> 17. finger bones	q. sternum
<u>METACARPALS</u> 18. heads of these bones form the knuckles	r. styloid process
<u>SCAPULA</u> , <u>STERNUM</u> 19. bones that articulate with the clavicle	s. trochlea
	t. ulna

3. Why is the clavicle at risk to fracture when a person falls on his or her shoulder? CLAVICLE TRANSMITS FORCE FROM PECTORAL GIRDLE TO THE STERNUM; HENCE EASILY BROKEN

4. Why is there generally no problem for the arm to clear the widest dimension of the thoracic cage? BECAUSE OF THE MOVABILITY OF THE SHOULDER JOINT

5. What is the total number of phalanges in the hand? 14

6. What is the total number of carpals in the wrist? 8

Bones of the Pelvic Girdle and Lower Limb

7. Compare the pectoral and pelvic girdles in terms of flexibility (range of motion) allowed, security, and ability to bear weight.

Flexibility: PECTORAL GIRDLE MORE FLEXIBLE THAN PELVIC GIRDLE

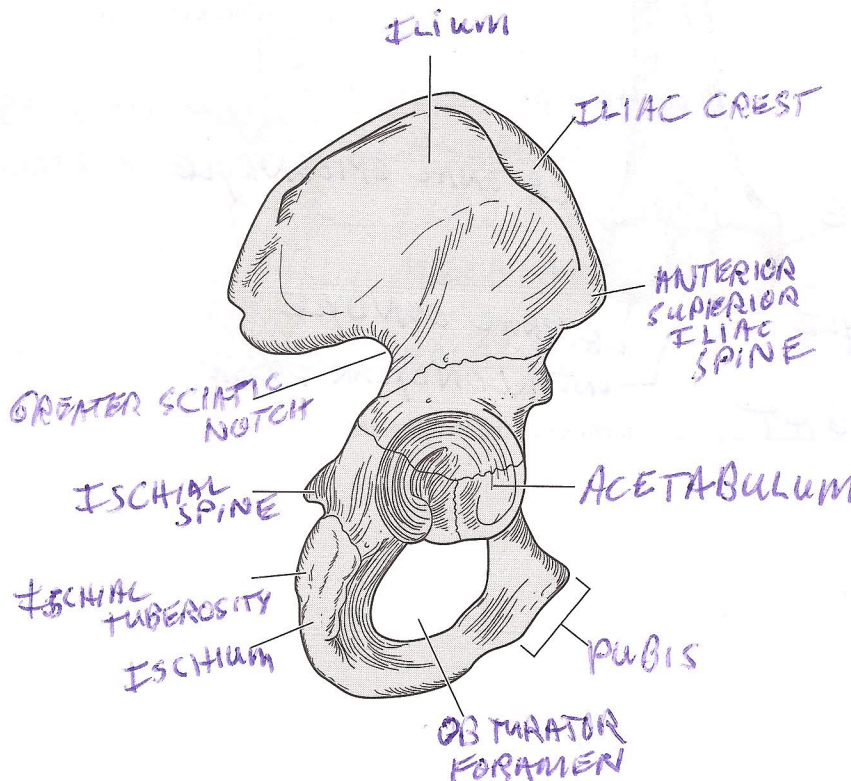
Security: PELVIC GIRDLE HEAVIER + MORE SECURED TO AXIAL SKELETON

Weight-bearing ability: PELVIC GIRDLE MUCH BETTER AT WEIGHT BEARING

8. What organs are protected, at least in part, by the pelvic girdle? REPRODUCTIVE ORGANS

9. Distinguish the true pelvis from the false pelvis. IRRELEVANT

10. Use terms from the key to identify the bone markings on this illustration of a coxal bone.



Key:

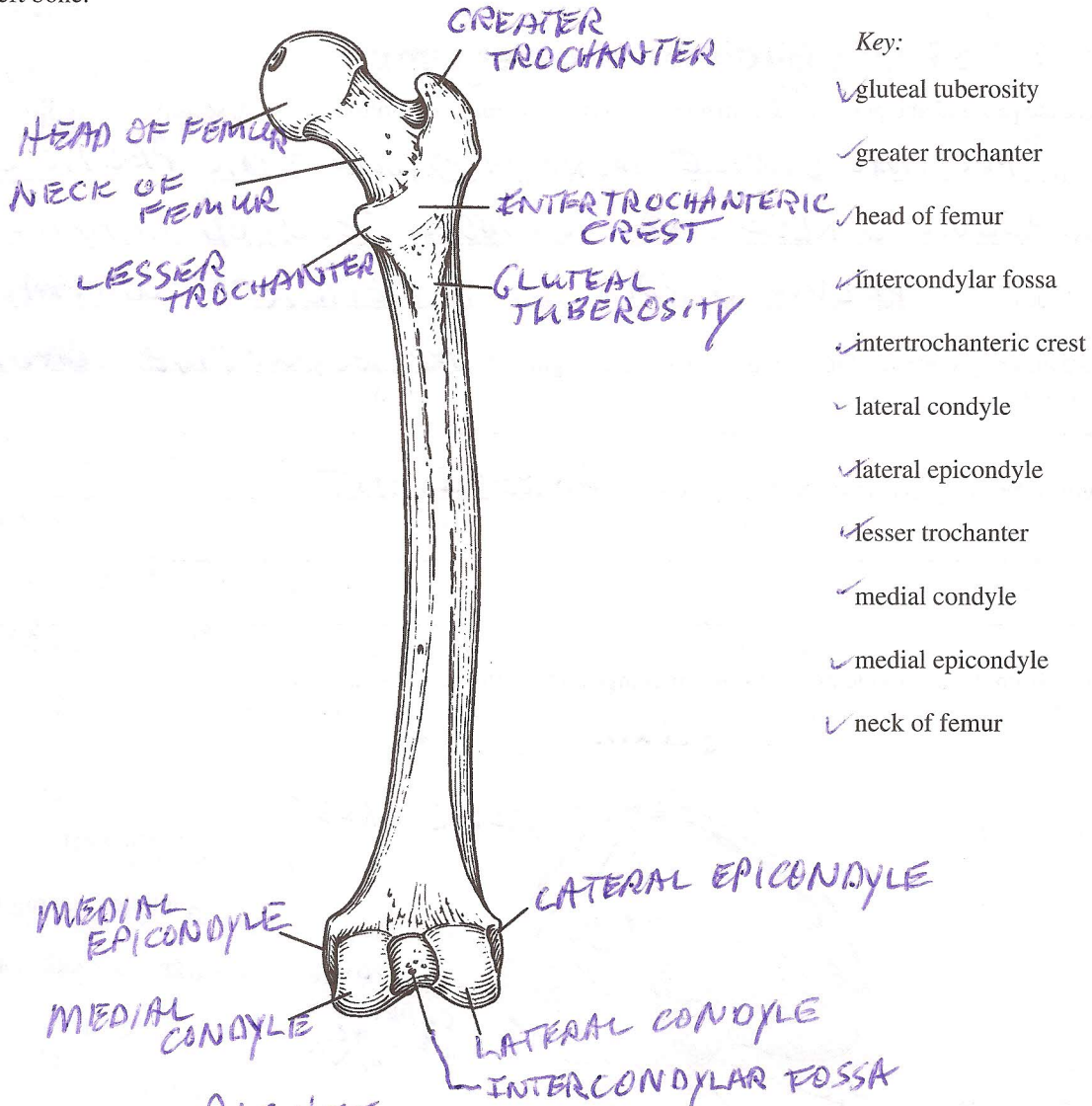
- acetabulum
- anterior superior iliac spine
- greater sciatic notch
- iliac crest
- ilium
- ischial spine
- ischial tuberosity
- ischium
- obturator foramen
- pubis

11. The pelvic bones of a four-legged animal, such as the cat or pig, are much less massive than those of the human. Make an educated guess as to why this is so.

FOR A FOUR-LEGGED ANIMAL HALF THEIR WEIGHT WILL BE ON THEIR PECTORAL GIRDLE + THUS PELVIC GIRDLE CAN BE SMALLER

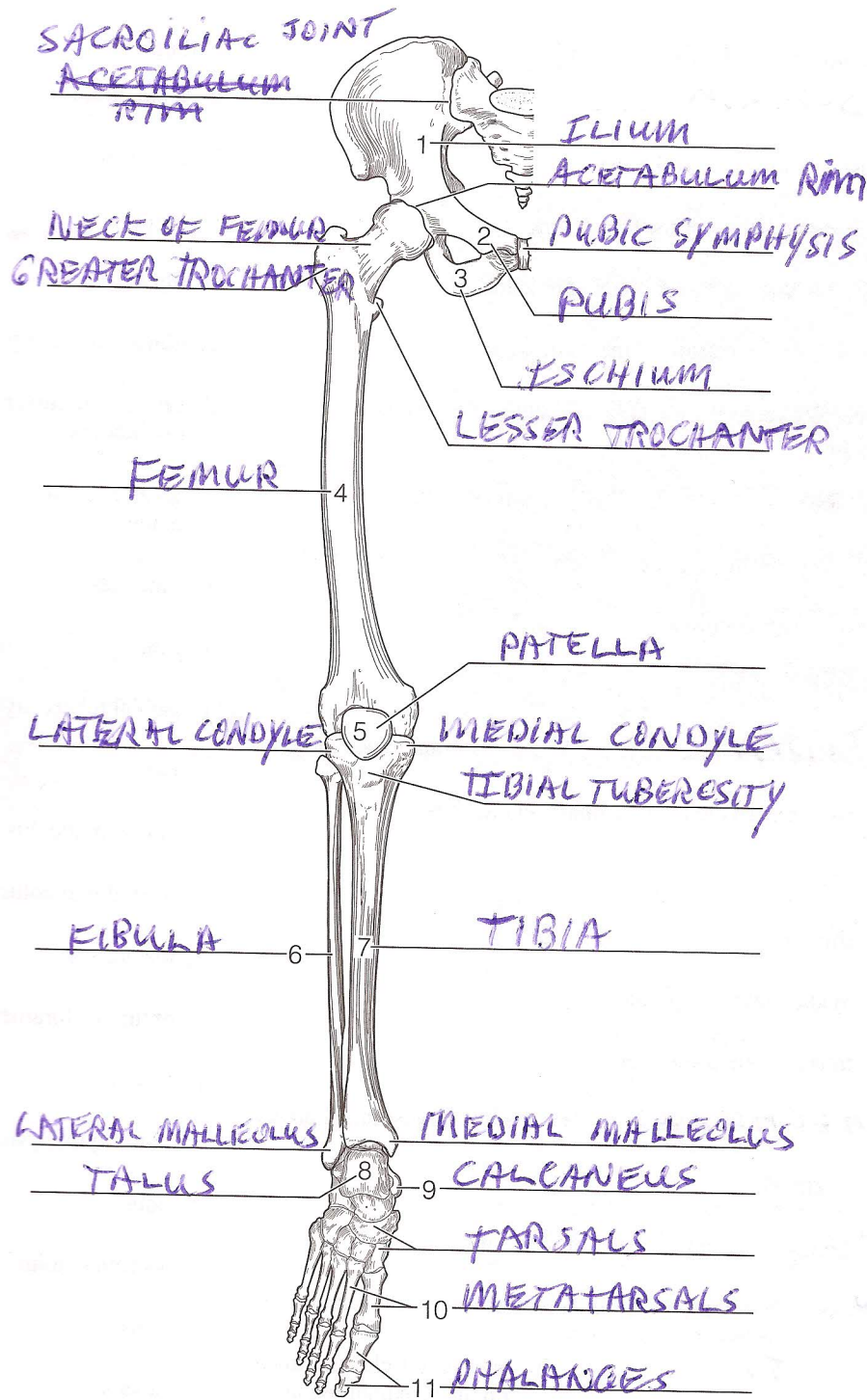
12. A person instinctively curls over the abdominal area in times of danger. Why? TO PROTECT ALL THE ORGAN IN THE ABDOMINAL CAVITY SINCE THEY ARE PROTECTED BY BONE

13. Match the terms in the key with the appropriate leader lines on the diagram of the femur. Also decide whether this bone is a right or left bone.



The femur shown is the RIGHT member of the two femurs.

14. Match the bone names and markings in the key with the leader lines in the figure. The bones are numbered 1-11.



Key:

- acetabulum (rim)
- calcaneus
- femur
- fibula
- greater trochanter
- ilium
- ischium
- lateral condyle
- lateral malleolus
- lesser trochanter
- medial condyle
- medial malleolus
- metatarsals
- neck of femur
- patella
- phalanges
- pubic symphysis
- pubis
- sacroiliac joint
- talus
- tarsals
- tibia
- tibial tuberosity

15. Match the bone names or markings in column B with the descriptions in column A. (Some terms may be used more than once.)

Column A		Column B
<u>ILIUM</u>	<u>ISCHIUM</u> , and	a. acetabulum
<u>PUBIS</u>	1. fuse to form the coxal bone	b. calcaneus
<u>ISCHIUM</u>	2. "sit-down" bone of the coxal bone	c. femur
<u>PUBIC SYMPHYSIS</u>	3. point where the coxal bones join anteriorly	d. fibula
<u>ILIAC CREST</u>	4. superiormost margin of the coxal bone	e. gluteal tuberosity
<u>ACETABULUM</u>	5. deep socket in the coxal bone that receives the head of the thigh bone	f. greater and lesser trochanters
<u>SACROILIAC JOINT</u>	6. joint between axial skeleton and pelvic girdle	g. greater sciatic notch
<u>FEMUR</u>	7. longest, strongest bone in body	h. iliac crest
<u>FIBULA</u>	8. thin lateral leg bone	i. ilium
<u>TIBIA</u>	9. heavy medial leg bone	j. ischial tuberosity
<u>FEMUR</u> , <u>TIBIA</u>	10. bones forming knee joint	k. ischium
<u>TIBIAL TUBEROSITY</u>	11. point where the patellar ligament attaches	l. lateral malleolus
<u>PATELLA</u>	12. kneecap	m. medial malleolus
<u>TIBIA</u>	13. shinbone	n. metatarsals
<u>MEDIAL MALLEOLUS</u>	14. medial ankle projection	o. obturator foramen
<u>LATERAL MALLEOLUS</u>	15. lateral ankle projection	p. patella
<u>TALUS</u> , <u>CALCANEUS</u>	16. the two largest tarsal bones	q. pubic symphysis
<u>TARSALS</u>	17. ankle bones	r. pubis
<u>METATARSALS</u>	18. bones forming the instep of the foot	s. sacroiliac joint
<u>OBTURATOR FORAMEN</u>	19. opening in hip bone formed by the pubic and ischial rami	t. talus
<u>e.</u> and <u>f.</u>	20. sites of muscle attachment on the proximal femur	u. tarsals
<u>TALUS</u>	21. tarsal bone that "sits" on the calcaneus	v. tibia
<u>TIBIA</u>	22. weight-bearing bone of the leg	w. tibial tuberosity
<u>TALUS</u>	23. tarsal bone that articulates with the tibia	