

Anatomy practice 1

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Department of Anatomy

- Blue floor: dissecting rooms
- Red floor: seminar rooms,
computer room,
ossarium (**lending bones** against to the index, it is not allowed to take them away from the department, you can study in the red floor),
room with X-rays,
museum, space for students
- Yellow floor: offices, laboratories

Course objectives

At the end of the course students should be able to:

1. Name all parts of the human skeleton including the detailed relief.
2. Describe correctly joints of the bones.
3. Describe the movements occurring at each joint.
4. Characterize the newborn skull.
5. Distinguish the male and female skull and pelvis.
6. Identify individual muscles of the human body, discuss their attachments and innervations.
7. Define actions of individual muscles and muscular groups.
8. Define skeletal structures demonstrated by radiographs in basic projections

Syllabus

Posted on the poster in the red floor or on the IS

1. Introduction into the study of anatomy. Anatomical terminology. RTG anatomy.
2. General osteology. Skeleton of the spine and thorax.
3. Skeleton of the upper extremity.
4. Skeleton of the lower extremity.
5. Neurocranium.
6. Splanchnocranium.
7. Cavities of the skull. Skull. Craniometry. Skull of the newborn.
8. Joints of the spine, thorax and skull. Joints of the upper extremity.
9. Joints of the lower extremity. Pelvis
10. Oral examination (osteology, arthrology). (18.-21.11.)
11. Muscles of the head, neck, thorax, and back.
- 12.+13. only lectures
14. Muscles of the abdomen. Inguinal canal. Credits.

Attendance

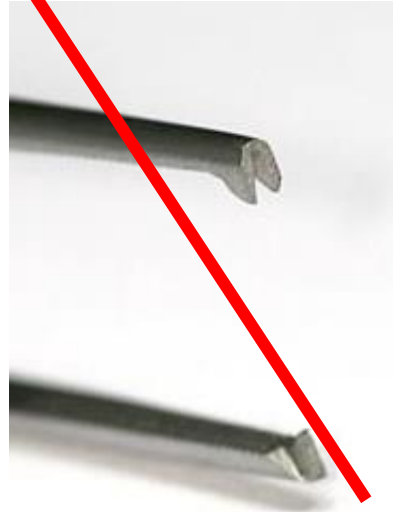
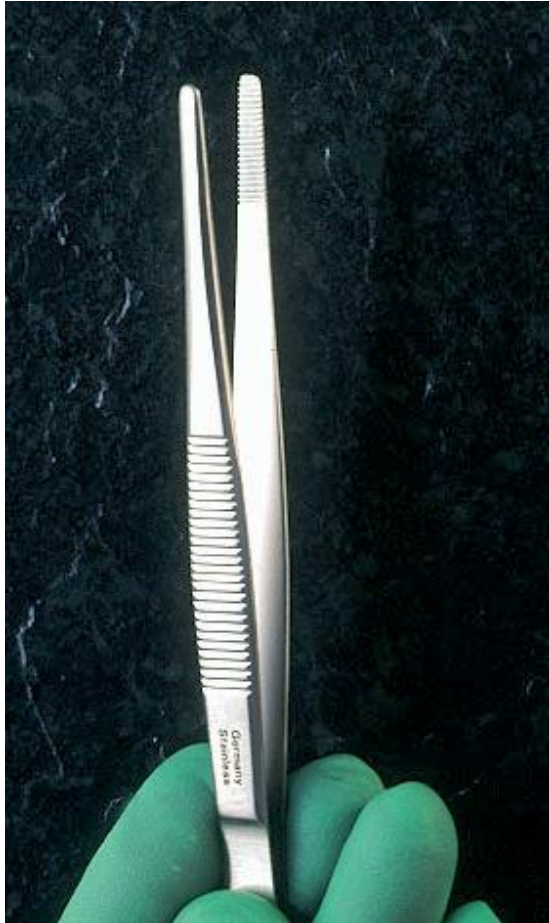
- Precise
- Completion of the subject is assessed by the course-unit credit. A precondition for obtaining the course-unit credit is 95% attendance at the seminars (1 non-attendance tolerated). Apologies and substitution, in sickness – the certificate from the doctor perhaps 1 excused absence
 - Replace with another group in the same week

**WHAT YOU WILL NEED?
and
SAFETY AT WORK**

Long hair pin together, painted nails, earrings, rings and bracelets x



probe



Cases
Lock and the key

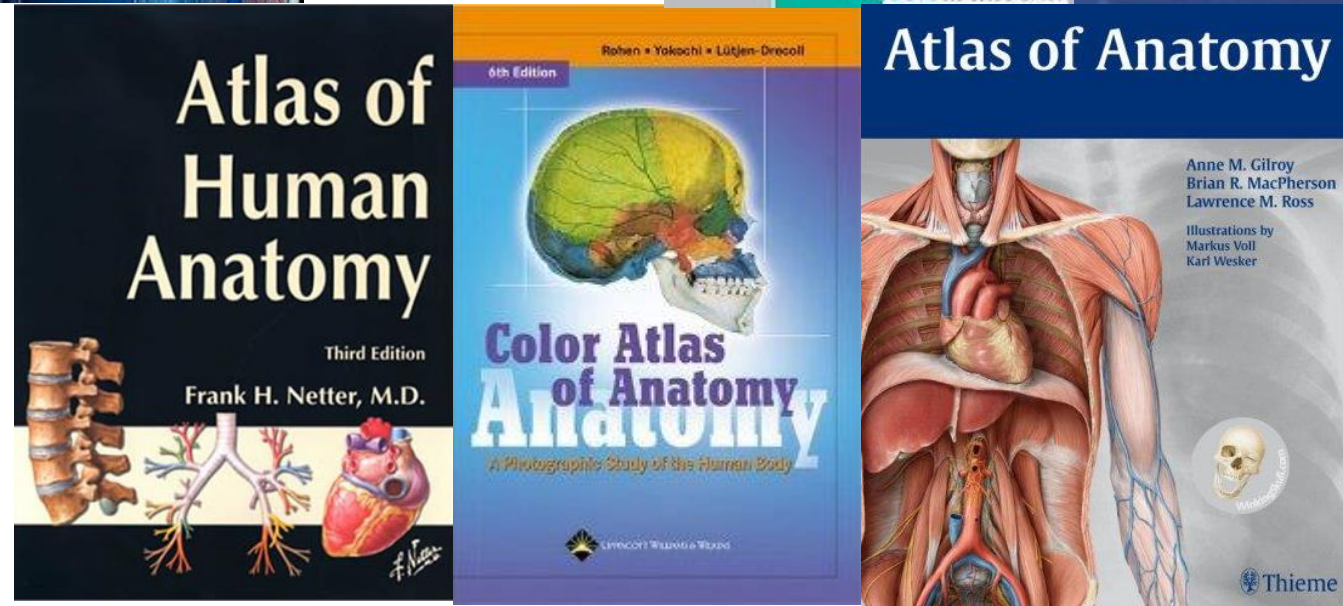
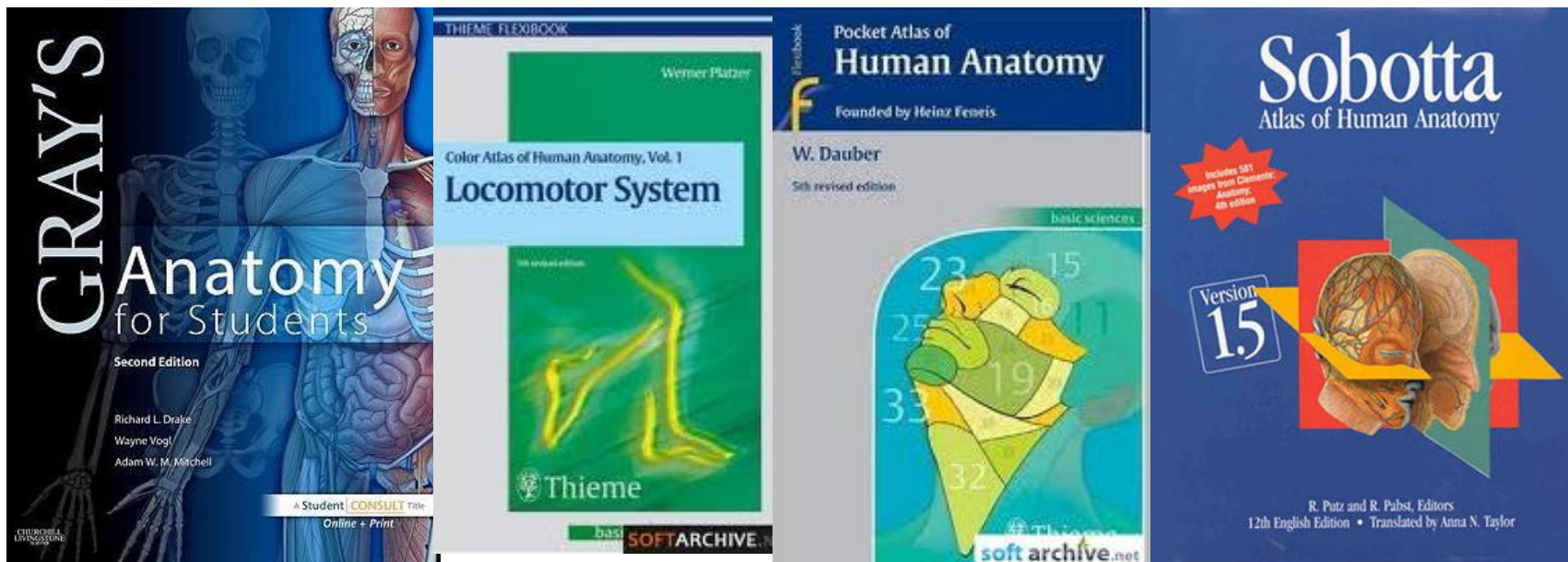


Blade no. 23
Holder no. 4



Bookshop: Malé Centrum (Small centrum)

University Campus (same door from corridor as the library is)



<http://elsevierelibrary.co.uk/bookshelf>

http://www.med.muni.cz/anatomie/

Anatomický ústav - Mozilla Firefox

Soubor Úpravy Zobrazení Historie Záložky Nástroje nápověda

http://www.med.muni.cz/anatomie/

Nejnavštěvovanější Jak začít Přehled zpráv

Anatomický ústav

Titulní stránka
Anatomický ústav
Lidé a kontakty
Fotogalerie
Výuka
Výzkum
Postgraduální studium
Témata samostatných prací
Muzeum
Dárcovství těl
Volná místa
Zajímavé odkazy

ANATOMICKÝ ÚSTAV

Lékařská fakulta MU
Brno

▲
▲
▲

Oddělení neuroanatomie
Oddělení lékařské antropologie
Univerzitní centrum chirurgické anatomie

Přístupů: 22183
Vytvořeno: 15. 7. 2008 14:19:40
Aktualizace: 14. 8. 2008 11:33:03

Vedoucí Anatomického ústavu: Prof. RNDr. Petr Dubový, CSc.,
Zástupce vedoucího Anatomického ústavu: MUDr. Ilona Klusáková, PhD.,
Sekretariát: Dana Procházková

Masarykova univerzita, Lékařská fakulta
Anatomický ústav
Kamenice 3, 625 00 BRNO
tel.: +420-549 49 1332, fax: +420-549 49 1320

Hotovo

Start Překlada... BBC iPla... Springer... Pronunci... Údajně p... Anatom... 1. term 1. practic... Microsoft... CS 8:48



- Titulní stránka
- Anatomický ústav
- Lidé a kontakty
- Fotogalerie
- Výuka
- Výzkum
- Postgraduální studium
- Témata samostatných prací
- Muzeum
- Dárcovství těl
- Volná místa
- Zajímavé odkazy**

Přístupů: 8407
Vytvořeno: 15. 7. 2008 14:19:40
Aktualizace: 11. 3. 2009 10:13:21

Zajímavé odkazy

Evropský týden mozku

Lékařská fakulta MU a

Česká společnost pro neurovědy

pořádají ve dnech 16.-20. března 2009 v prostorách lékařské fakulty MU cyklus přednášek seznamujících širokou veřejnost s novými poznatky a trendy ve výzkumu mozku.

Odkaz na materiály ETM:

Pozvánka

Progress on brain research 2009

Pokroky ve výzkumu mozku 2009

Kosti:

bones

http://www.meddean.msu.edu/meded/grossanatomy/learnem/bones/main_bone.htm

<http://www.ehc.com/vbody.asp>

<http://www.mnsu.edu/emuseum/biology/humananatomy/skeletal/skeletalsystem.html>

<http://www.vh.org/adult/provider/anatomy/atlasofanatomy/index.html>

<http://www.instantanatomy.net/>

Lebka:

skull

<http://www.univie.ac.at/...ation.html>

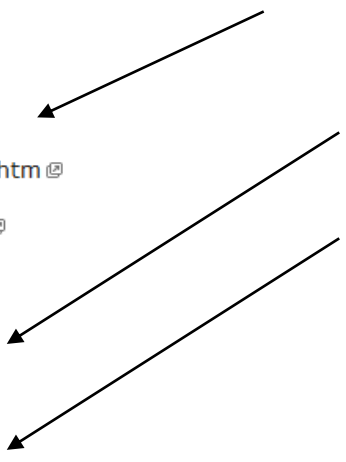
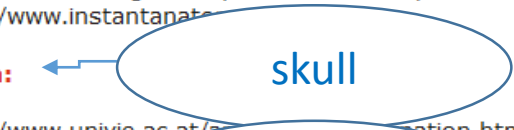
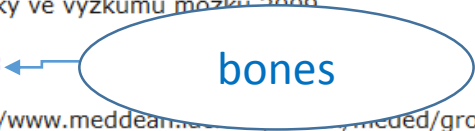
Klouby:

joints

<http://www.mnsu.edu/...humananatomy/skeletal/skeletalsystem.html>

<http://www.instantanatomy.net/>

Interesting links



Lending of bones

monday **10.00 – 17.00***

tuesday **10.00 – 16.00***

wednesday **8.00 – 15.00***

thursday **8.30 – 16.00***

friday **8.30 – 14.00***

*** 11.30 – 12.30 lunch break**



Safety at work

- Every accident (even small injuries) that happens during your education immediately report, write to the accident book
- If a student becomes pregnant – please report, need to interrupt the study



Anatomical nomenclature

- Anatomy is the basis of the language of medicine. Students learn a new language consisting of at least 4500 words. International.
- Many anatomical terms are derived from Latin and Greek.
- To describe the relationship of one structure to another, the anatomical nomenclature should be used. To be understood you must express yourself clearly, using the official terms in the correct way.
- 1. Andreas Vesálius, founder of the modern anatomy, 16. century.
- 2. Basiliensia Nomina Anatomica, B. N. A.,
1895
- 3. Ienaiensia Nomina Anatomica, I. N. A.,
1935
- 4. Parisiensia Nomina Anatomica, P. N. A.,
1955 accepted 1960, last corrections - 1985 (5640 terms)

International Anatomical terminology – FCAT 1998

Anatomical nomenclature

The first word is name of described formation,
next adjectives specificate it
and in the end there is a name of formation where the
described formation is located.

Examples:

Collum (neck) **radii** (of radius)

Collum (a neck) **anatomicum** (anatomical) **humeri** (of humerus)

Collum (a neck) **chirurgicum** (surgical) **humeri** (of humerus)

Tuberculum (a tubercle, a bulge) **majus** (big) **humeri** (of humerus)

Spina (a thorn) **iliaca** (iliac) **anterior** (fore) **superior** (upper) **ossis coxae** (of coxal bone)

Epicondylus medialis humeri

Epicondylus medialis femoris

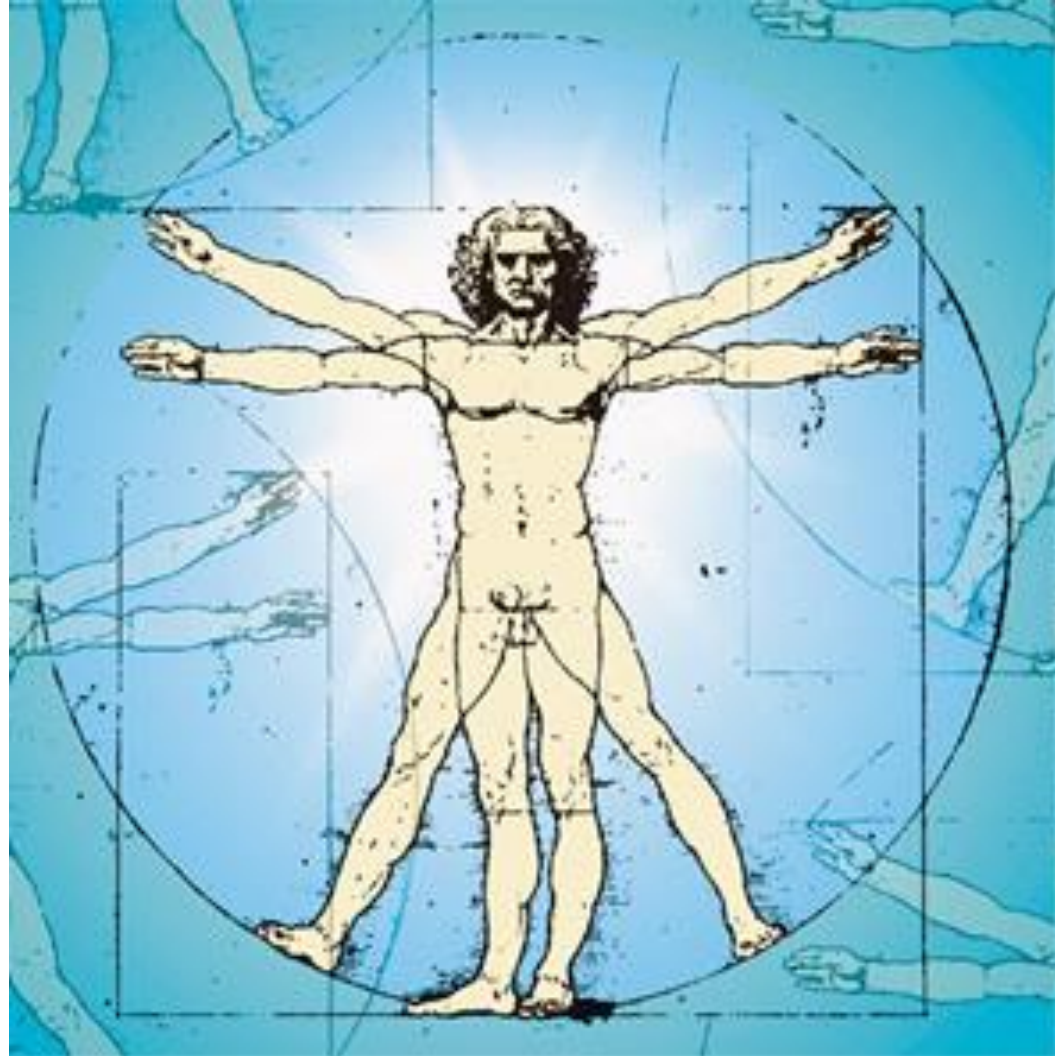
Anatomical position standard erect position



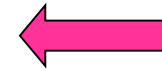
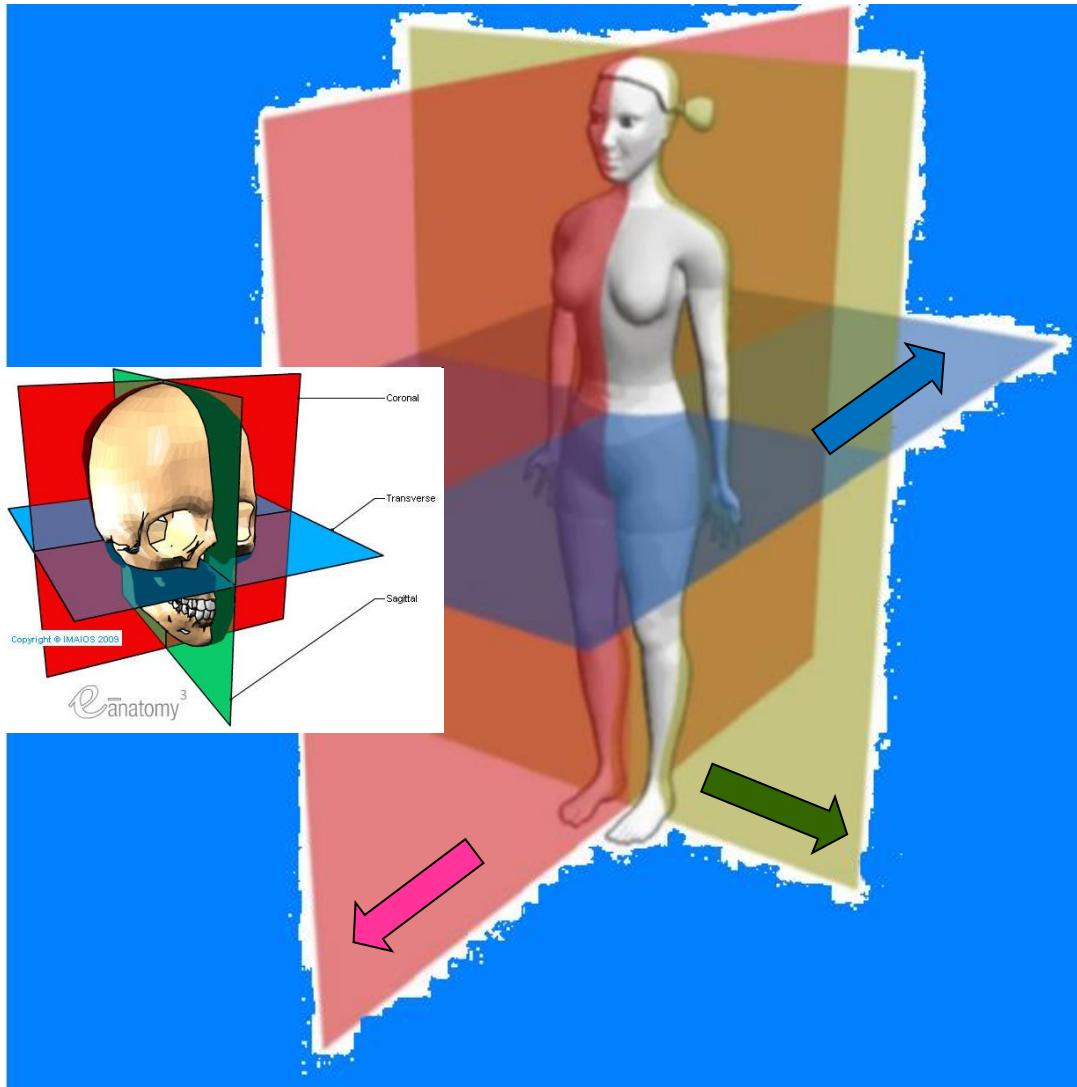
Not
a military
position



Orientation on the body



PLANES – 3 anatomical planes or sections



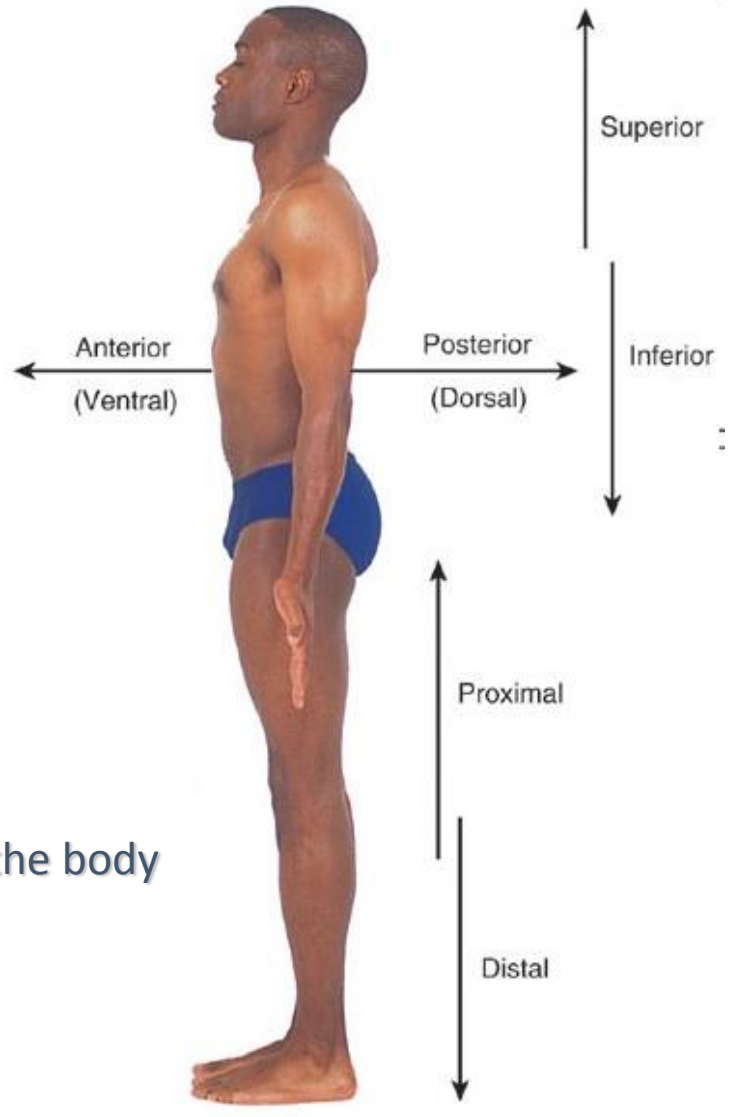
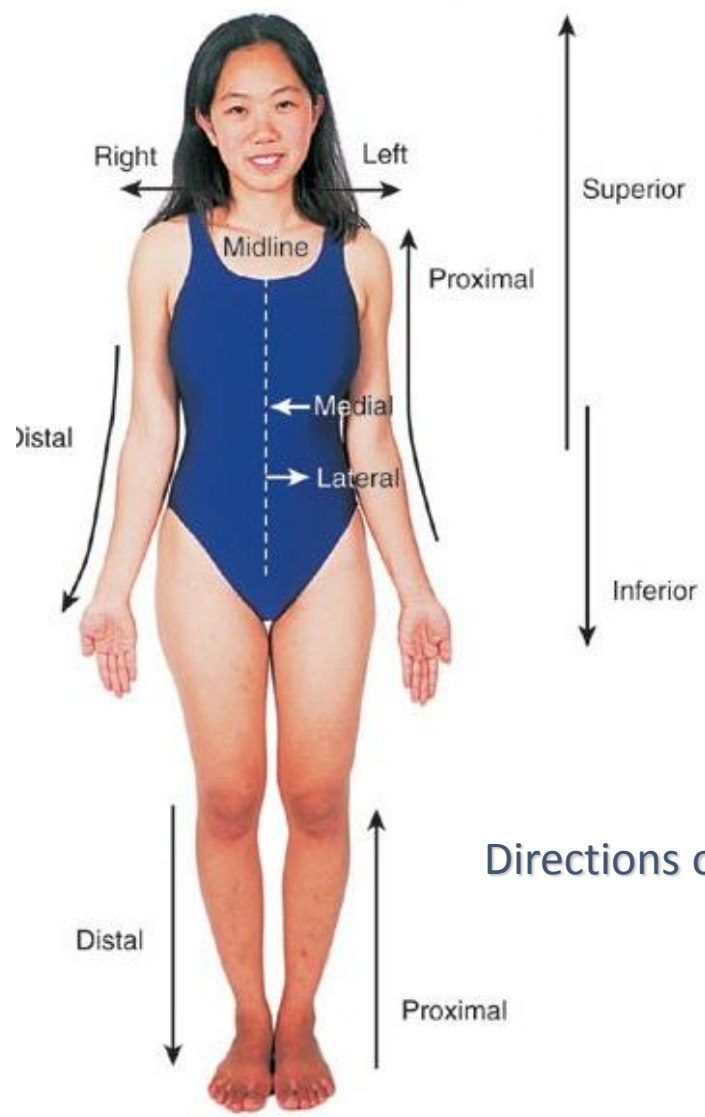
Sagittal plane (mediann)
Midsagittal
Right and left



Transversal plane (horizontal)
Superior and inferior

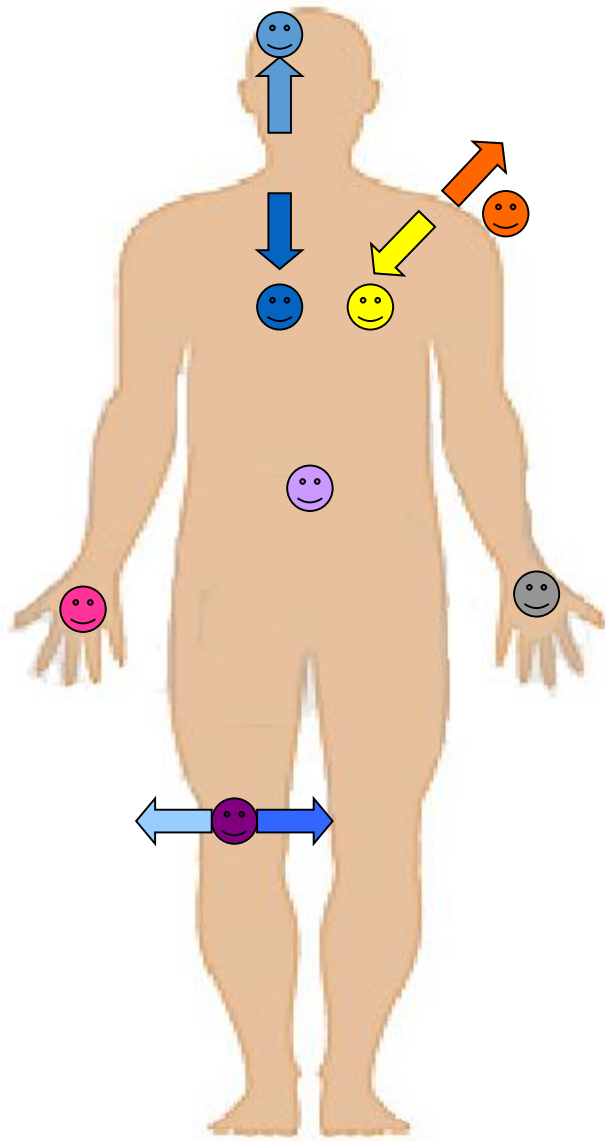


Frontal plane (coronal)
Anterior and posterior

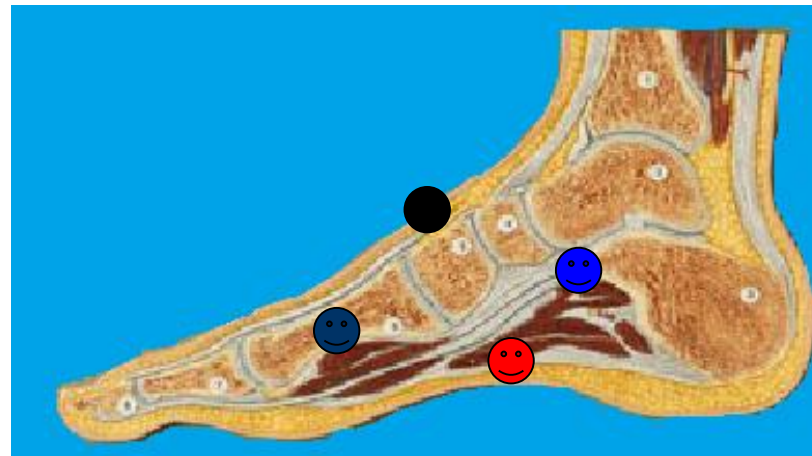


Directions on the body

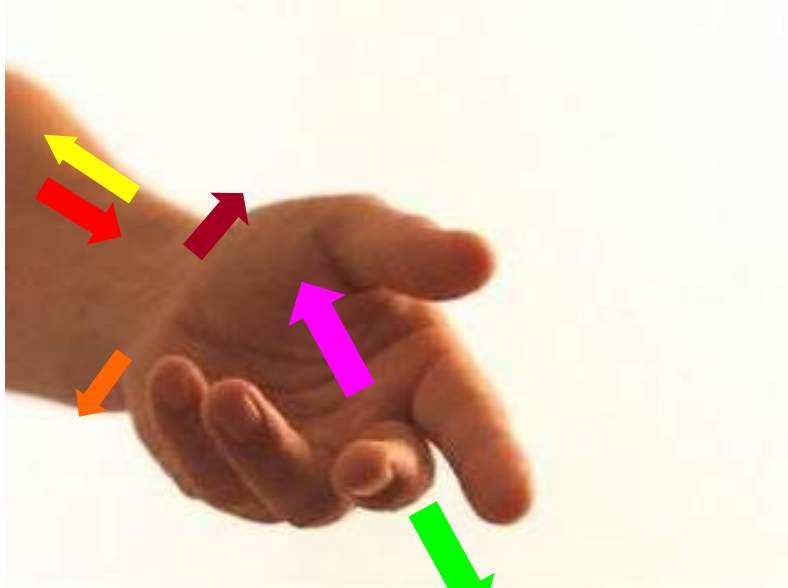
Directions on the body












- | | |
|-----------------|------------------------|
| → cranialis | → caudalis |
| 😊 superior | 😊 inferior |
| → ventralis | → dorsalis |
| 😊 anterior | 😊 posterior |
| → medialis | → lateralis |
| 😊 medianus | 😊 medius (intermedius) |
| 😊 dexter | 😊 sinister |
| ● superficilais | ● profundus |
| 😊 internus | 😊 externus |



Directions at the limbs



- proximalis 
- distalis 
- radialis 
- ulnaris 
- tibialis 
- fibularis 
- palmaris 
- plantaris 
- dorsalis 



Positive and negative relief

- **Sulcus** – a groove
- **Incisura** – a notch
- **Canalis** – a canal
- **Fossa** – a pit, hollow
- **Fovea** – a pit, hollow
- **Processus** – a projection, prominence
- **Spina** – a thorn
- **Tuberculum** – a tubercle
- **Tuber** – a torus
- **Tuberositas** – a tuberosity
- **Foramen** – an opening, orifice, gap
- **Facies** – a facet, surface
- **Articulus** – a joint
- **Os, ossis, ossa** – a bone, bones
- **Externus** – external

Internus – internal

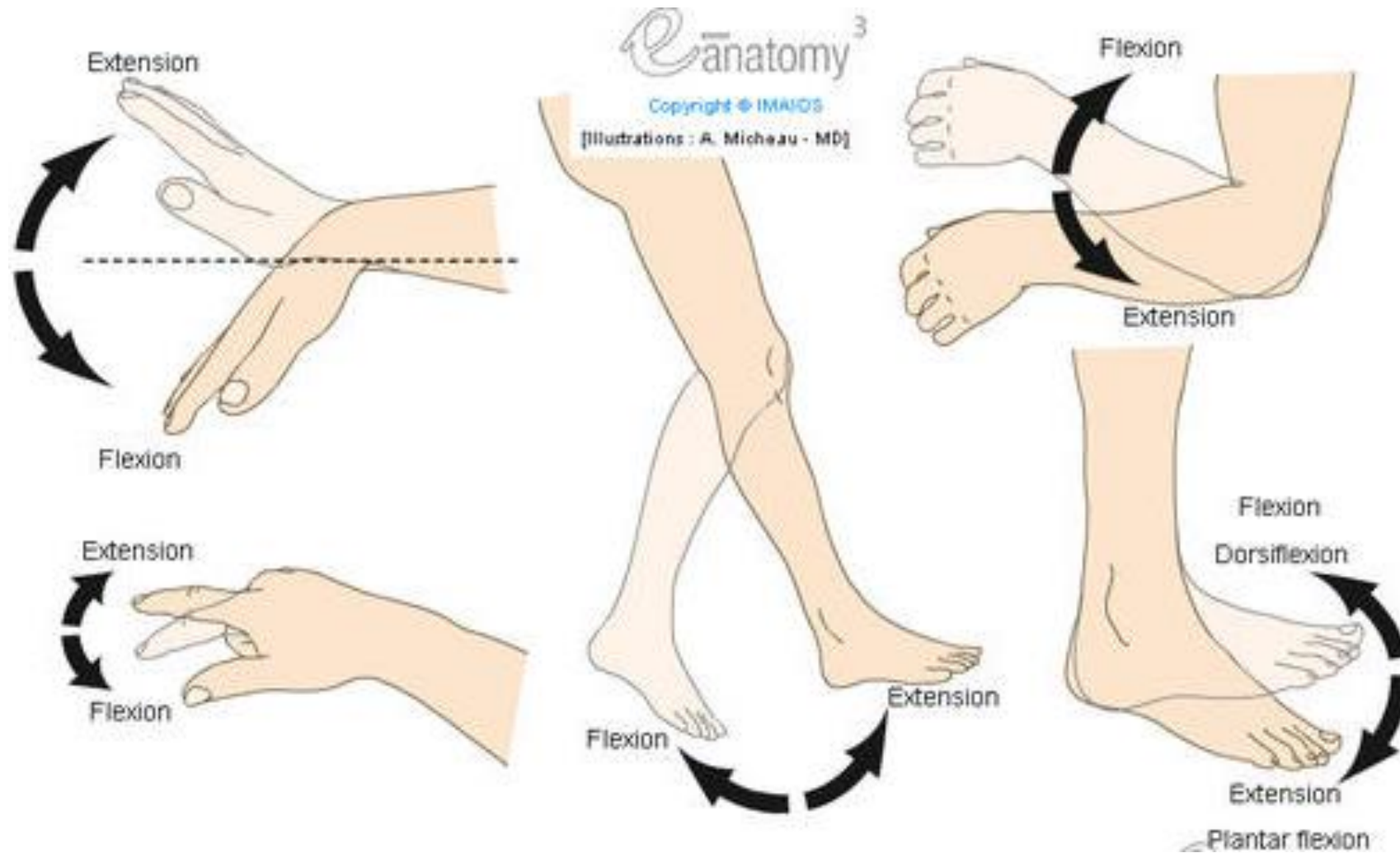
Superficialis – superficial

Profundus – deep

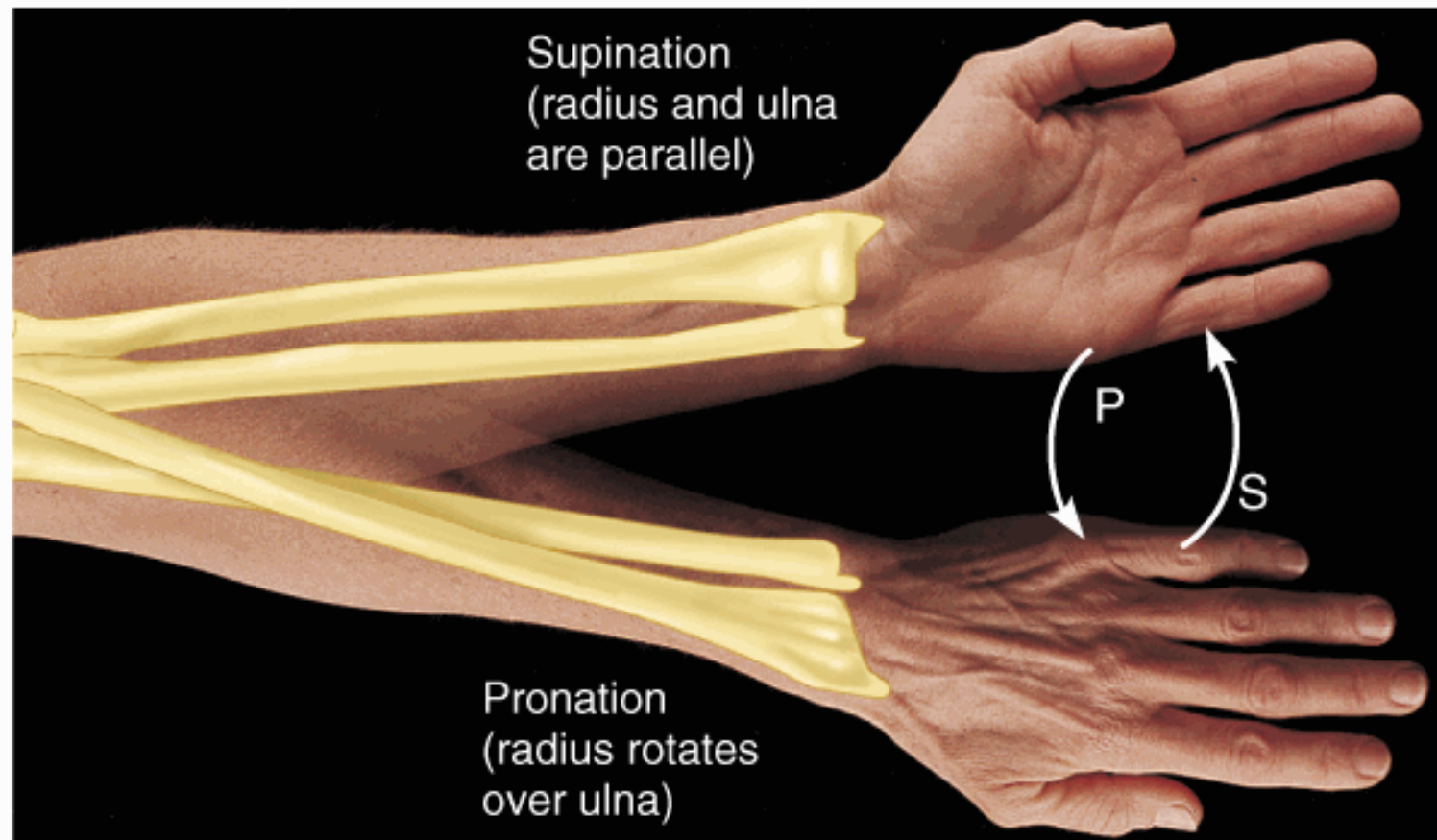
Caput – a head

Capitulum – a small head

Collum, cervix – a neck



Movements



Supination
(radius and ulna
are parallel)

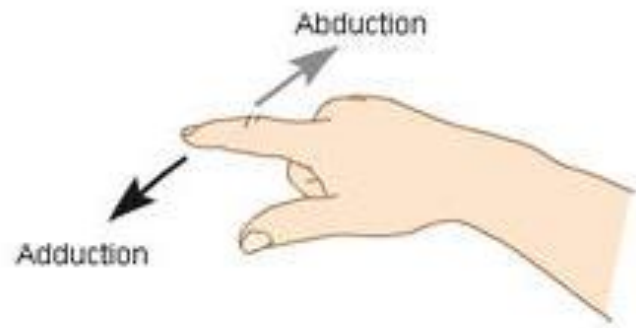
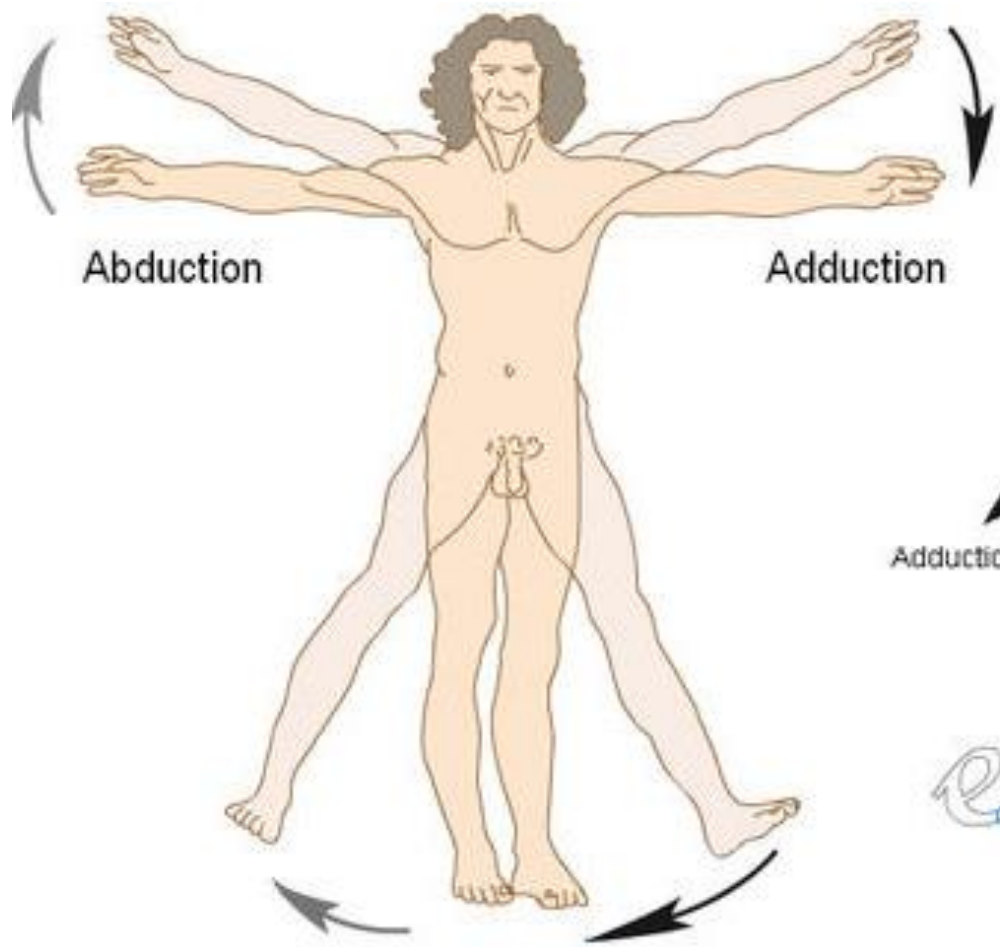
Pronation
(radius rotates
over ulna)

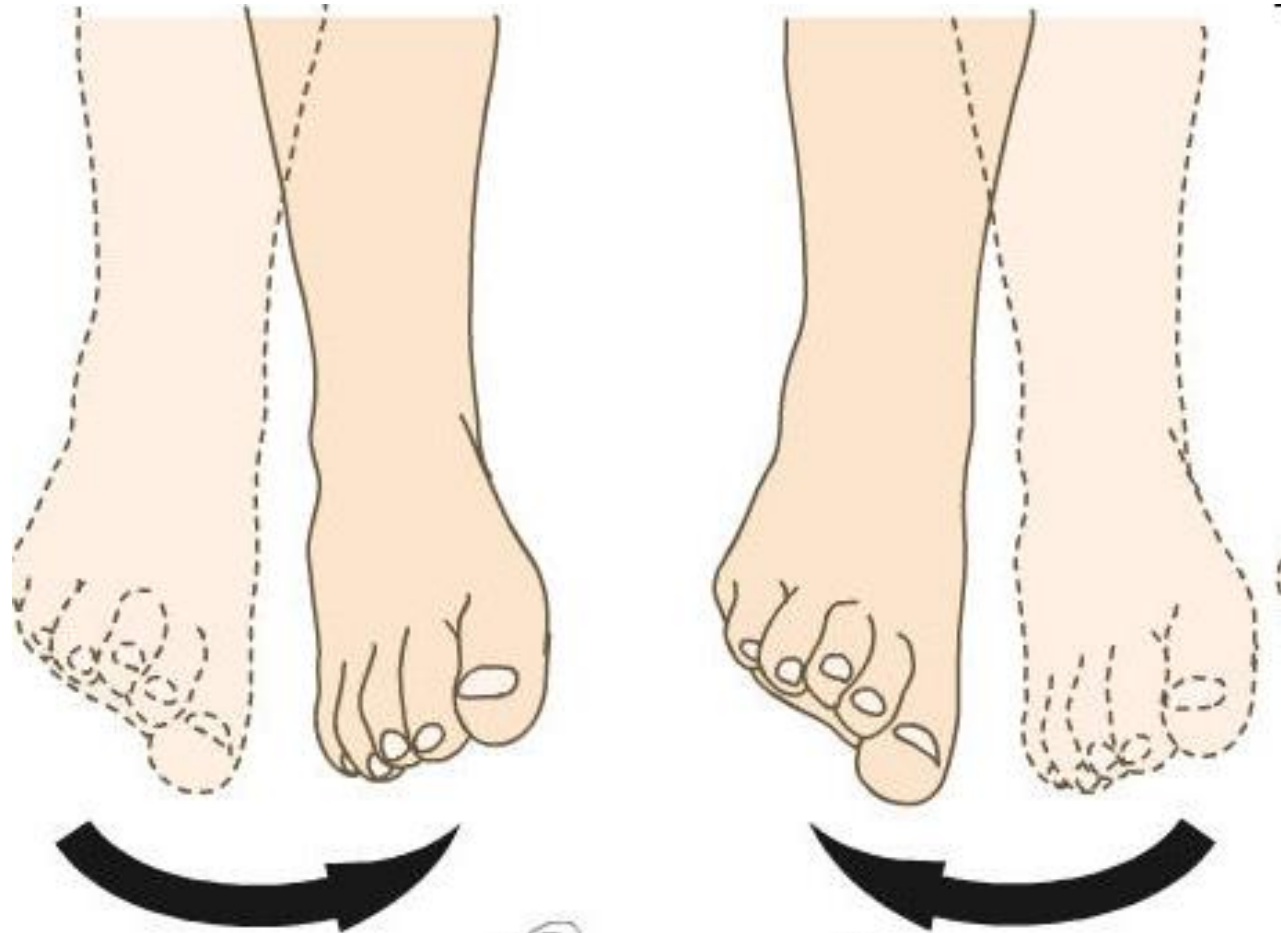
P

S

(a) Supination (S) and pronation (P)

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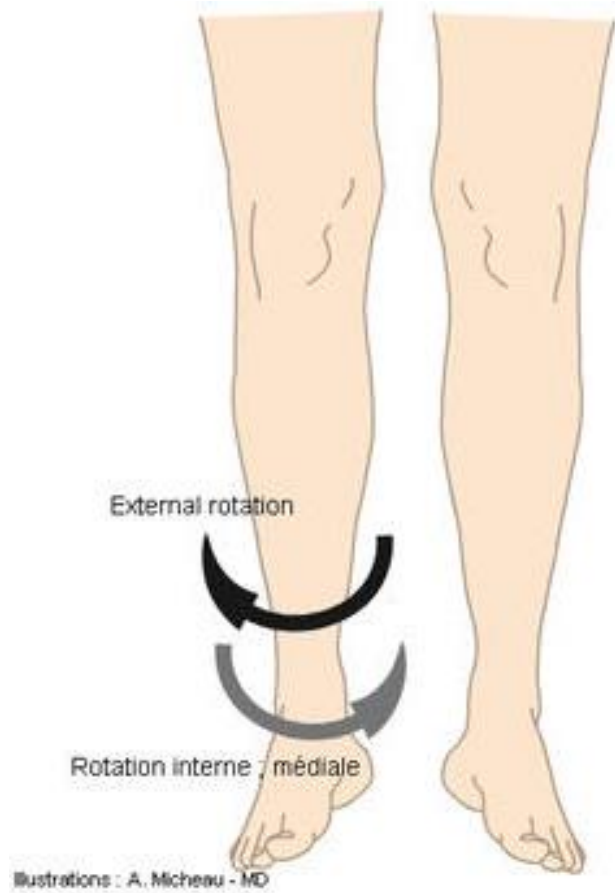
Inversion

*e*anatomy³

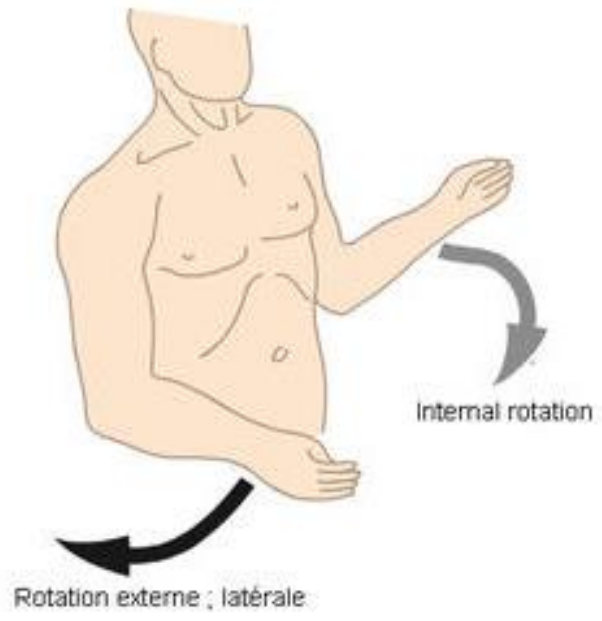
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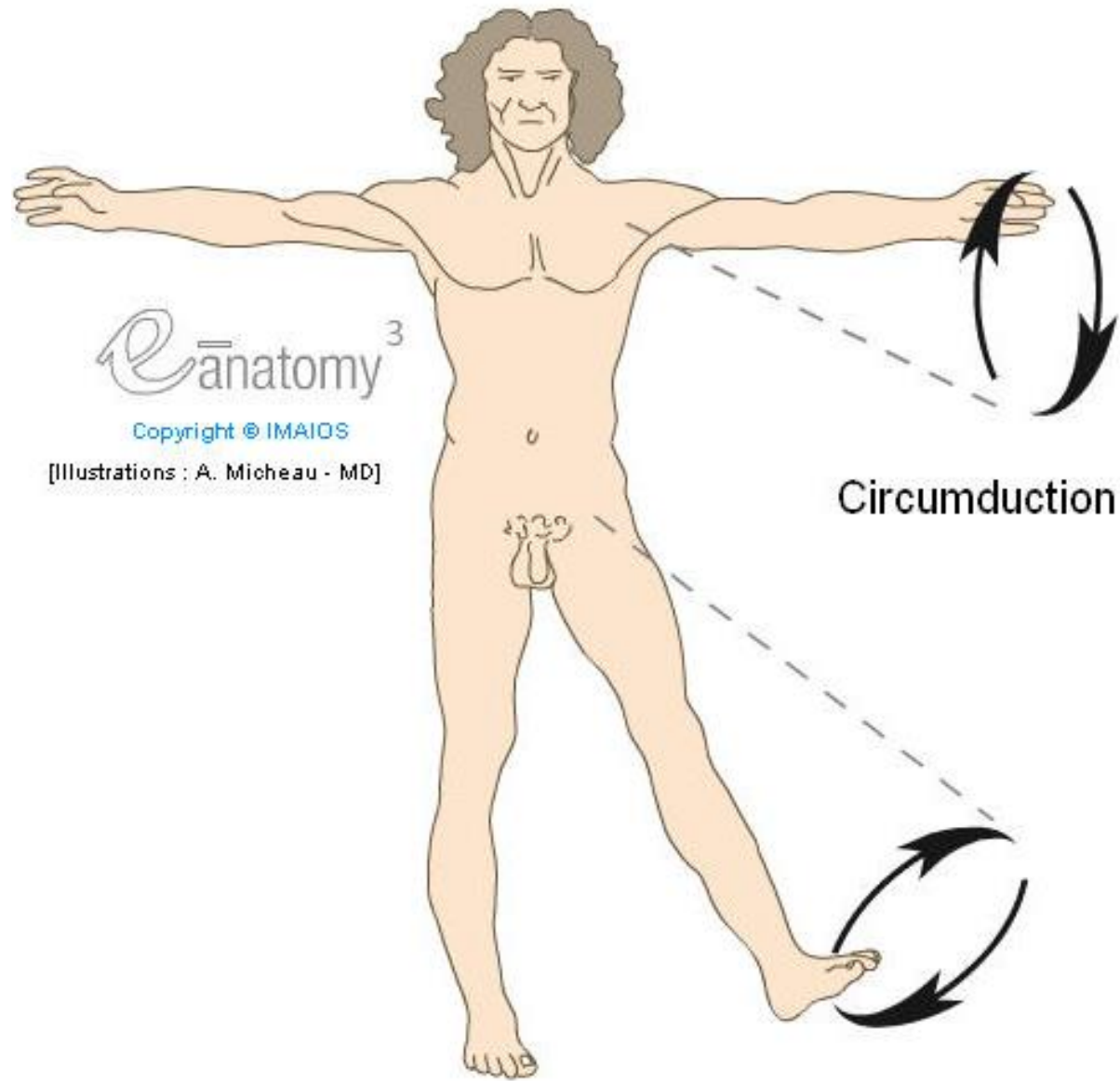
Eversion

[Illustrations : A. Micheau - MD]



e-anatomy³
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eānatomy³

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[Illustrations : A. Micheau - MD]

Circumduction

How to describe bones

- knowledges of the general osteology, basic orientation on the body with planes are obvious

In describing bones we proceed according to the following outline::

1. Name of the bone
2. Type of the bone (long, short)
3. Dividing into separate parts (ends, body, surfaces, borders....)
4. Description of the positive and negative relief of the isolated parts
5. In paired bones estimate the laterality

X-ray's anatomy



**Anatomy is
essential for
understanding
radiology.**

Wilhelm Conrad Röntgen 1845-1923

1895 – discovery of x-ray

1901- awarded by Nobel price in physics

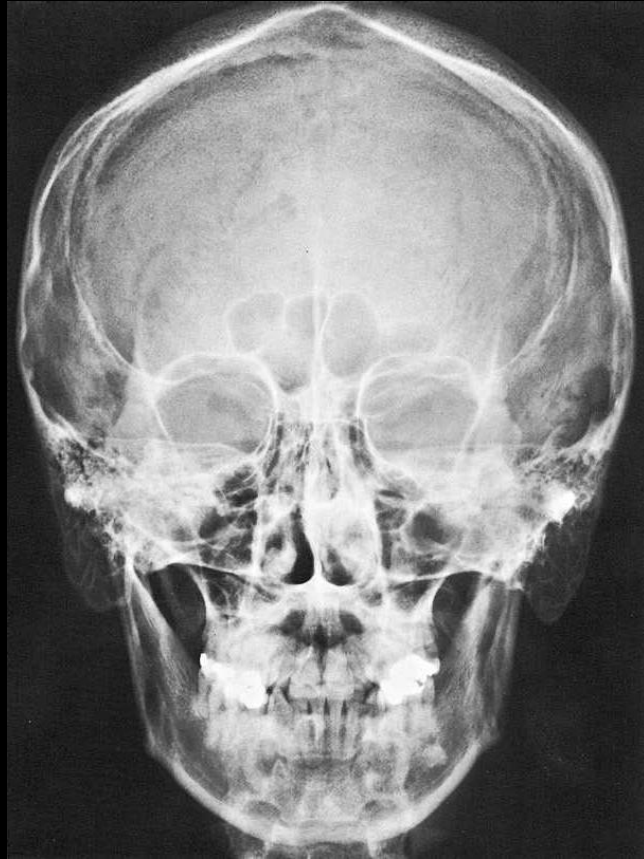


X-rays principle

- A highly penetrating beam of x-rays „transluminates“ the patient, showing tissues of differing densities on x-ray film.
- A tissue or organ that is relatively dense absorbs (stops) more x-rays than a less dense tissue.
- Like a negative
- Light structures - shadows
- Dark structures - brightening

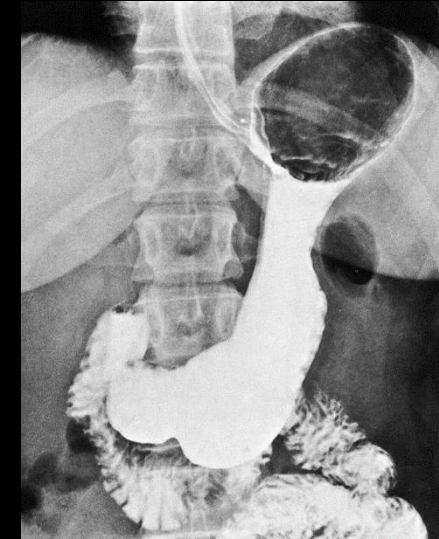


NATIVE x-ray
without using of
contrast agent



**X-rays with contrast
material** (Contrast
examination)

Negative
Gass, air



Positive
Barium sulfate

Iodine-based molecules

