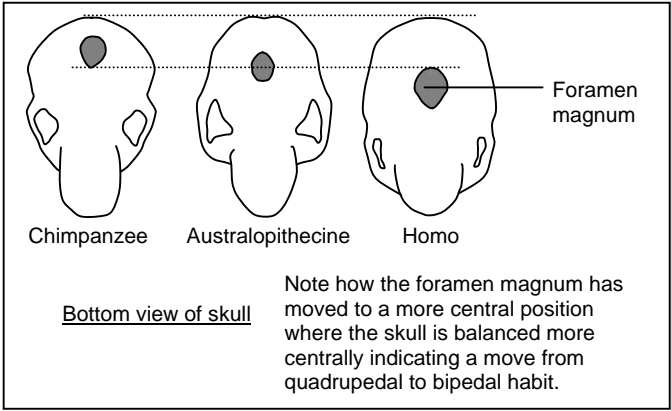


Human Evolution

Ape - Bipedalism

Points for Discussion

Walking on two legs;

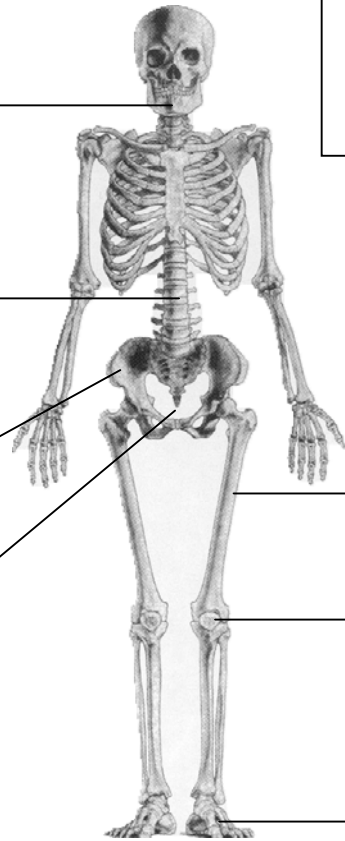


Position of foramen magnum.
Located more centrally under skull so skull is more balanced on spine. See box to the right.

Spine shape.
Lower back has fewer vertebrae which form an 'S' shape so upper body is above the centre of gravity.

Pelvis shape.
Short and broad for attachment of large and powerful walking muscles.

Pelvis shape.
Bowl shaped to help support abdominal organs.



Femur.
Long and angled in from hip so upper body is above the centre of gravity.

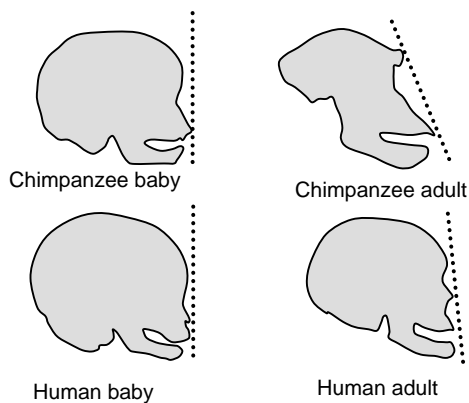
Knee joint.
Shape allows leg to be fully straightened.

Foot shape.
Platform shaped; toes short; big toe forward thrusting; inner side of foot arch shaped to act as a shock absorber.

From the African Ape - Neoteny

Points for Discussion

- Neoteny is when infant characteristics persist in the adult;
- Adult humans possess many infant primate features;
 - Baby chimpanzees and humans have large skulls (relative to the rest of the body size), small jaws and no brow-ridges;
 - These features do not persist in the adult chimpanzee;
 - They do persist in the adult human;
- Thus, it is thought that humans evolved by having the period of development of certain features extended beyond the norm for other apes;
- Brain growth is very rapid in fetal apes but slows at birth;
- In humans, the rate of brain growth remains at the very rapid fetal rate until 6 months after birth producing a very large brain indeed.



The dotted line indicates the growth pattern resulting in the elongated jaw of the chimpanzee. In humans the growth is very slight and the adult skull remains similar in proportion to the baby. Note the similarity in shape of the two baby skulls.