Abstract

Knee joint (*articulatio genus*) is the most complicated joint in human body from the anatomical view. Knee joint is compound, hinge joint, *gynglimus*, which has a major role in movement of the lower limb. Knee joint is related to the transfer of body weight in horizontal (walking, running) and vertical (jumping) direction. Knee joint is also the biggest joint in the human body, which is characterized by three bones: femur, tibia, patella.

The greatest intervention of evolutionary development of human beings on to the knee joint is transition from four-legged walk to two-legged walk (bipedalism). The basic shape of the human knee joint is very similar to knee joints of chimpanzees however chimpanzees do not have problems with injuries typical to humans. The difference between them is in the angle of the knee joint caused by bipedalism movement. Chimpanzees hold the center of gravity in front of their hips and the knee joint clutches the angle of 70° with the hips. On the other hand, knee joint of humans has the angle of 170°, which causes more pressure to the knee joint and therefore is more vulnerable to injuries.

Knee joint does not meet the demands of a modern man that overloads it with sports performance or pressures it with body weight impact from obesity. This overloading does not occur in chimpanzees due to their movement stereotypes that follows anatomical arrangement of the knee joint.