

ME6230: Mechanics of Human Movement
Week 11 Questions S Tarun Prasad -
ME17B114

1. State a consequence of excessive knee extension?

Ans. Slight flexion for shock absorption during walking is lost due to excessive knee extension.

2. Explain the aspects of excessive knee flexion?

Ans. Involves flexion contracture in the knees. Spasticity in the knees prevents full extension.

3. List some of the uses of dorsiflexion control?

Ans. During initial contact, it prevents foot slap. During the swing phase, it helps the foot clear the ground.

4. What is Talipes Calcaneus and what causes it?

Ans. It is the deformity in which the forefoot is in extreme dorsiflexion and it is caused by spasticity in anterior tibial muscles or weakness in triceps surae.

5. Give a brief description of Talipes Equinus.

Ans. The forefoot is in plantar flexion and there is spasticity in triceps surae or weakness in dorsiflexion. In severe cases, the heel never touches the ground.

6. What is Talipes Equinovarius?

Ans. Curved foot where the load is borne by the outer border of the forefoot.

7. What are the causes of Valgus Knee and Varus Knee?

Ans. Valgus Knee is caused due to lateral trunk bending and abducted hips. Varus Knee is caused due to bicep adduction deformity.

8. What are the different type of mobility assistive device and briefly describe them?

Ans. Prosthesis - Replacement for missing limb, Orthosis - Supportive devices to compensate leg pathologies, and Exoskeletons to augment performance.

9. What are the causes of lower limb amputation

Ans. Vascular diseases, Congenital causes, accidents and cancerous tumours.

10. What does a prosthetic limb constitute?

Ans. Liner, socket, pylon and foot.