pg. 637 #1,3,4,&7 (Hip Fractures and Lower Extremity Joint Replacement)

1. **Why is it crucial for the OTA to understand hip anatomy and treatment of hip fractures?**
   1. It’s important for the OTA to understand hip anatomy and treatment of hip fractures because they are very common within the geriatric population. Elderly people are at risk for falls which also puts them at risk for hip fractures due to a fall or some kind of trauma. The OTA needs to understand all information involved with the hip, so they can appropriately and effectively treat a patient. It’s also important for them to know this information so they can follow all precautions to prevent additional harm to the patient.
2. **Identify four factors that will influence fracture healing**
   1. The age and health of the patient, where the fracture was located, initial displacement of bone, and the amount of blood supply to the fragments. Overall, these factors influence the amount of time that it will take for a fracture to heal.
3. **Define the levels of weight-bearing restrictions**
   1. **NWB**: non-weight bearing which indicates that no weight at all can be placed on the extremity involved
   2. **TTWB**: toe-touch weight bearing) indicates that only the toe can be placed on the ground to provide some balance while standing—90% of the weight is still on the unaffected leg.
   3. **PWB**: partial weight bearing indicates that only 50% of the person’s body weight can be placed on the affected leg
   4. **WBAT**: weight bearing at tolerance indicates that patients are allowed to judge how much weight they can put on the affected leg without causing too much pain
   5. **FWB**: full weight bearing indicates that patients should be able to put 100% of their weight on the affected leg without causing damage to the fracture site

**7) Briefly describe the positions of instability in both of the anterior and posterior approaches to hip replacement arthroplasty**

a. The position of instability and precautions for the posterior approach to a hip replacement are no hip flexion greater then 90 degrees, no internal rotation, and no adduction (crossing legs or feet). Anterior approaches are a little different including no external rotation, no adduction (crossing legs or feet), and no extension. It’s important, as the OT practitioner, to understand these approaches, the positioning, and precautions associated with both.

Pg. 673 #1-19 (Amputations and Prosthetics)

1. **What do the following abbreviations mean: AE, TD, BE?**
   1. AE: Above elbow TD: terminal device BE: below elbow
2. **Which arm functions are lost—and which functions are retained—in a long Transradial amputation?**
   1. Loss of hand, wrist, and elbow functions but good should function will remain
3. **List the advantages and disadvantages of a myoelectric prosthesis**
   1. Advantages include improved cosmesis, improved grip force, minimal or no harnessing, ability to use overhead, minimal effort needed to control device, and closely corresponds to human physiological control
   2. Disadvantages include cost of prosthesis, frequency of maintenance and repair, fragile nature of glove and need for frequent replacements, absence of sensory feedback, slow response of electrical hand, and increased weight
4. **Which motions accomplish TD opening with a mechanical prosthesis?**
   1. Biscapular abduction and humeral flection are motions necessary to operate the TD on the affected side. TD opening, and closing is accomplished with the elbow extended, at 30, 45, & 90 degrees and with full elbow flexion, arm overhead, down at side, out to the side, and even leaning over floor level.
5. **Which five questions should be asked when one is observing an amputee in an activity?**
   1. Is the patient using the prosthesis spontaneously in the activity?
   2. Is it being used as a gross stabilizer or in a non-active pattern of use?
   3. Does the patient use large compensatory body movements instead of prepositioning the components to the optimal position?
   4. Is the patient overshooting the target?
   5. Is the patient using the proper grip force?
6. **What is the recommended initial wearing period for postoperative prosthesis?**
   1. Patient is instructed to wear postoperative prosthesis three times a day, beginning with 15-minute periods with 5 minutes of active use. Eventually the wearing period is increased over time.
7. **What does “prepositioning the TD” mean?**
   1. Prepositioning the TD involves rotating the TD to the best position to grasp an object or perform any given activity. It’s putting the TD in a comfortable and safe position.
8. **Why is it important to wrap the stump?**
   1. This is when the stump is shrinking and shaping to best fit the prosthesis. The stump is formed by forms of compression aids to help with shaping it how medical professionals want it, so it comfortably fits with the prosthesis.
9. **What are the responsibilities of the OTA in initial evaluation of the LE amputee?**
   1. Data collection from chart review, interviews with patient and family members, general observations, behavioral checklists, and administering standardized tests once competency is demonstrated
10. **Which method can be used postoperatively to ensure control of stump swelling and to contour the stump for the permanent prosthesis?**
    1. Stump wrapping, stump care/hygiene, range of motion exercises, and desensitization.
11. **Why is the LE amputee patient instructed not to place pillows under knee and hip?**
    1. To prevent any unnecessary swelling and abnormal flexion of joint associated. The patient should be in a neutral position to prevent contractures, pressure sores, and additional deformity. For example, a pillow shouldn’t be placed under the knee because then it’s going to be difficult or even impossible for the person to get full extension in knee.
12. **Amputees sometimes feel as if their missing limb is moving. What is this phenomenon called?**
    1. Phantom limb pain and phantom sensation
13. **Which adaptive devices can ease donning of an LE prosthesis for an individual with loss of flexibility?**
    1. Sock aid, long handled shoe horn, long-handled reacher, and elastic shoe laces
14. **Which method can be used to teach the LE amputee to don pants in bed?**
    1. The patient is encouraged to roll from side to side, perform bridging activities with knee and hip flexion, and push the foot of existing limb so they can push up in bed and put clothing on over hips.
15. **Which transfer approach is generally used by the LE amputee?**
    1. Standing pivot transfer (90-degree pivot)
16. **For which activities must the LE amputee have good dynamic balance?**
    1. ADL’s and IADL’s like dressing, bathing, transferring, reaching for objects overhead, and retrieving objects from floor.
17. **For the LE amputee, which areas are assessed, discussed, and practiced in home management?**
    1. Preparing simple and full meals, doing laundry (both light and heavy), cleaning house, stripping and making beds, and working at various levels with a cane, walker, and crutches (with and without prosthesis)
18. **What will be reviewed by the OT or OTA during family education?**
    1. Exercise programs are reviewed with the family to make sure they have a clear and good understanding of the information. A written form is provided. The OT and OTA also educate the family about the durable medical equipment and how to use it.
19. **Describe which is included in discharge planning for LE amputee?**
    1. Educating the family, providing home exercise programs, and securing necessary DME. A home visit may be completed before discharge.