# Infection Prevention and Joint Replacement



## Background

- Infection after joint replacement surgery can be devastating and require further surgery and prolonged treatment with antibiotics
- Our skin and our environment contain millions of bacteria
- Preventing this bacteria from getting into the replaced joint takes a comprehensive approach and vigilance on the part of patients



## **Risk Factors for Infection**

- The following are risk factors that increase the potential for infection after joint replacement
  - Obesity: especially Body Mass Index > 40
  - Smoking
  - Diabetes
  - Poor Nutrition
  - Oral Prednisone
  - Medications that suppress the immune system
  - Kidney failure and or liver failure
  - Ongoing infection in another area of the body
  - Open wounds or sores
  - Prior surgery on the affected joint
  - Recent cortisone injection into the joint within 3 months



### Modifiable Risk Factors

- Because some of these risk factors can be optimized, we strongly recommend that patients considering surgery work to reduce their risk prior to elective joint replacement
- This includes
  - Weight loss: ideally a Body Mass Index of 35 or less
  - Smoking Cessation
  - Nutrition improvement
  - Improved Diabetes control: Hemoglobin A1c  $\leq$  7.0

### Nutrition Optimization

- Weeks before surgery consider starting the following to improve your immune system and healing capacity
  - Multivitamin
  - Vitamin A 10,000IU daily
  - Vitamin C 1000mg daily
  - Vitamin D 2000mg daily
  - Zinc 50mg daily
- Increased consumption of lean protein will also strengthen your ability to heal.
- Whey protein powder can be purchased in any grocery store or pharmacy and used to make smoothies as a meal supplement



### Hair Removal

- Do not shave around your surgical area with a razor for 7 days prior to surgery. This opens up skin pores that can get contaminated by bacteria
- Any hair around the surgical area will be removed with special clippers just prior to surgery



## **Skin Preparation**

- Bathing with Hibiclens prior to surgery as well as the morning of surgery can reduce the amount of bacteria on the skin and help reduce the risk of infection
- Start this at least 3 days prior to surgery
- **DO NOT** shave around the surgical area for 7 days prior to surgery. This allows bacteria to get deep into your skin pores
- **DO NOT** apply creams, lotions or perfumes after you bathe the morning of surgery



## **Bathing Instructions**

- Showering Instructions: These instructions differ from what is on the Chlorhexidine package. Please use the following instructions for showering:
  - Rinse your body thoroughly with water first.
  - Turn the water off to prevent rinsing the Chlorhexidine soap off too soon.
  - Wash from the neck downwards. Be especially careful to wash the part of your body (back, legs, chest, etc.) where your operation will be performed.
  - Wash your body gently for five minutes. Do not scrub your skin too hard. You can use a sponge to help with lathering.
  - Turn water back on, rinse well and pat dry with a *clean* towel.
  - Do not apply powder, lotion, deodorant or hair products after third shower.
  - Do not shave the area of your body where your surgery will be performed. Shaving increases your risk of infection.

### Skin Preparation



- Follow this map to ensure you have adequately washed your body with the Hibiclens
- If you are having shoulder surgery, pay particular attention to your arm pits and backs of your shoulder.

### Antibiotics

- You will receive intravenous antibiotics at the time of surgery
- If you are going home the day of surgery you will receive a prescription for oral antibiotics to take the night of surgery
- It is imperative that you get this filled an take this dose
- If you are having a shoulder replacement, you will receive additional antibiotics to take before and after surgery



## Hygiene

- Hand hygiene can help prevent germ transfer
- Purell is a great way to keep your hands clean
- Purchase this in advance of surgery and keep it in handy locations and use frequently
- Make sure that anyone handling your incision has clean hands.



### **Incision Management**

- Any drainage from your incision can lead to infection, particularly if it persists.
- If fluid can come out, fluid can go in and track bacteria with it
- If you have any persistent drainage out of your incision, immediately let our office know so we can check on it and take appropriate steps



## Signs of Infection

- Cardinal signs of infection include redness, swelling, drainage, fever and increased pain.
- While some redness and swelling can be normal after a joint replacement, if you have any concerns please contact our office immediately
- You can also take a picture of your incision with your phone and send it to avatar@kneehipsho.com

### **Other Infection Prevention Measures**

- Maintain optimal nutrition after surgery
- Maintain strict hygiene including hand washing, clean clothes, towels and sheets and a clean household
- Protect your incision like it is a fragile heirloom.
- Do not submerse your incision under water for at least 3 weeks or until you are seen back for your first postoperative visit