

# Why do I need to quit smoking?

## Orthopedic patients who smoke have the following:

- 100% increase in the number of superficial infection
- 200-500% increase in the number of deep infection, including bone infection
- 25-30% longer for fractures to heal
- 30-40% increase chance fractures don't heal
- 50-150% overall increase in complications
- 50-100% more likely to sustain a fracture
- 200-650% more likely to sustain a tendon injury
- 200-500% more likely to not heal after arthrodesis surgery
- Lose bone at twice the rate of non-smokers

## If you quit smoking you can reduce your risk:

- 60% reduction of overall complications after a fracture
- 87% reduction of wound complications
- 41% reduction of hospital post-operative complications
- 66% reduction of major complications

## Direct Smoking Effects

### Bone Density

- Smoking has been shown to decrease bone density, increase bone break down and impair calcium absorption in a rat model
  - Smokers with open tibia fractures were 32% more likely to have a non-union and on average took 4 weeks longer to heal
  - Smokers were 3-18 times more likely to have bone healing problems
  - Fractures in smokers take 25% longer to heal

### Performance Tests

- Smoking roughly equal to 5 years of aging

### Wound Complications and Infection

- Smokers with open tibia fractures had 2x as many skin infections and were 3.7x more likely to develop a bone infection.
- Smokers with ankle fractures were 6x more likely to develop an infection compared to non-smokers.
- Smokers with calcaneus fractures are 50% more likely to have wound complications

### Fusion Rates

- Bunion Surgery- most non-unions are in smokers
- Ankle fusion- 3.75x non-union rate
- Subtalar fusion- 3.8x non-union rate
- Hindfoot fusion- 2.7x non-union rate
- Spine fusion- 5x non-union rate

### Hospital Complications

- 41% higher risk of post-operative complications

### Tendon/Ligament

- ACL reconstruction- 3x higher failure
- Rotator cuff- 1.74x more likely of sustaining tear
- Distal biceps- 7.5x more likely to tear