



# FRACTURE MANAGEMENT

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2007

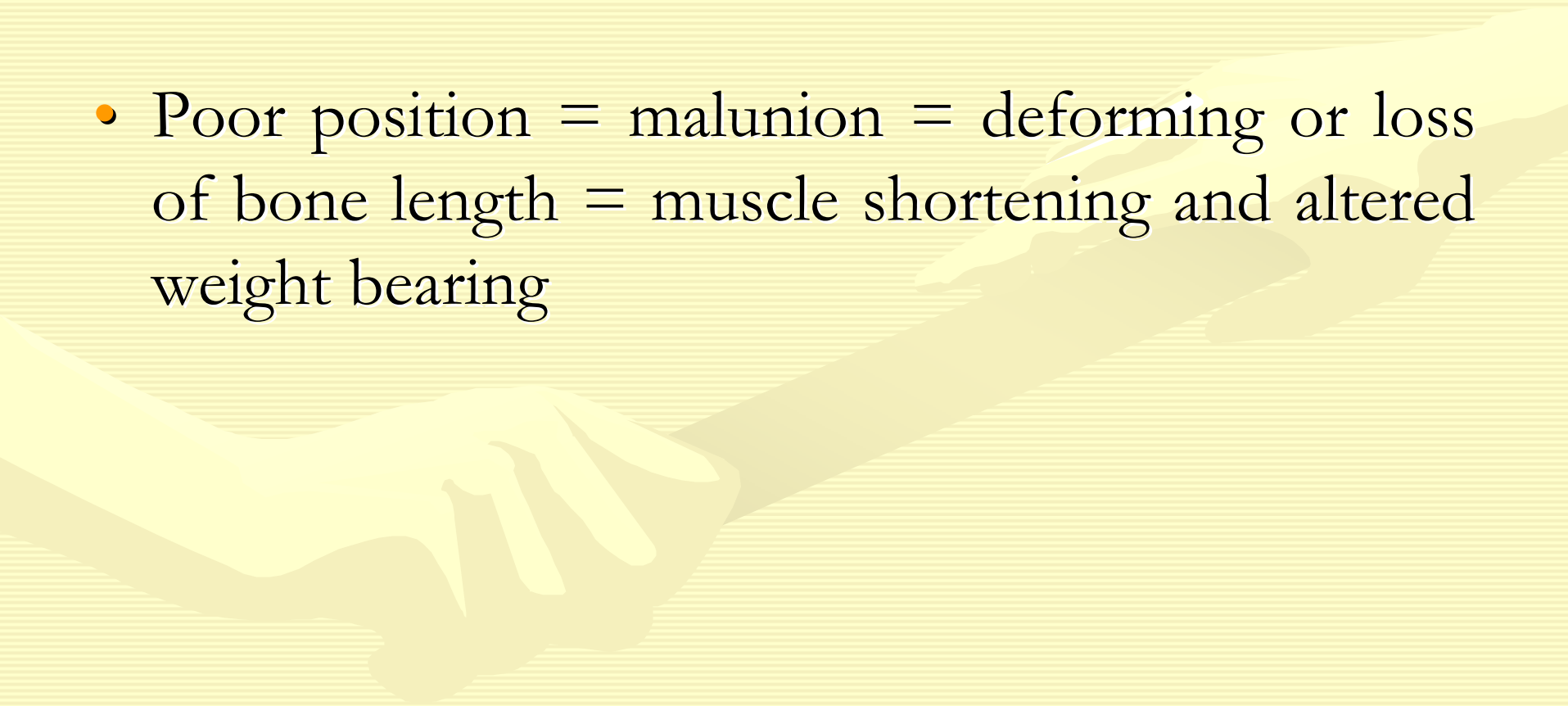
# FRACTURE MANAGEMENT

- **3 STAGES**
- **REDUCTION**
- **IMMOBILISATION**
- **REHABILITATION**

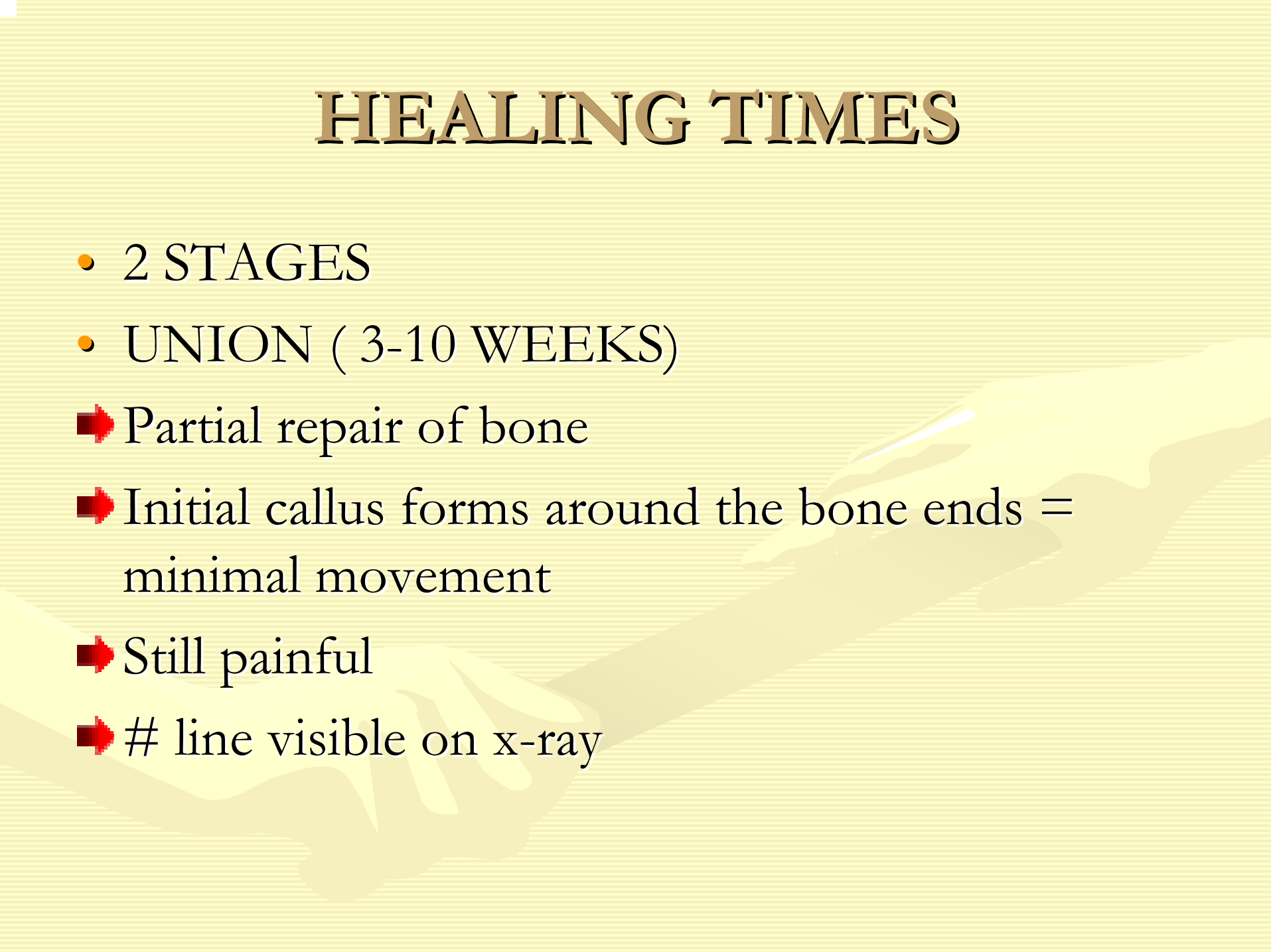


# REDUCTION

- Manipulation of the bone to it's correct position
- Poor position = malunion = deforming or loss of bone length = muscle shortening and altered weight bearing

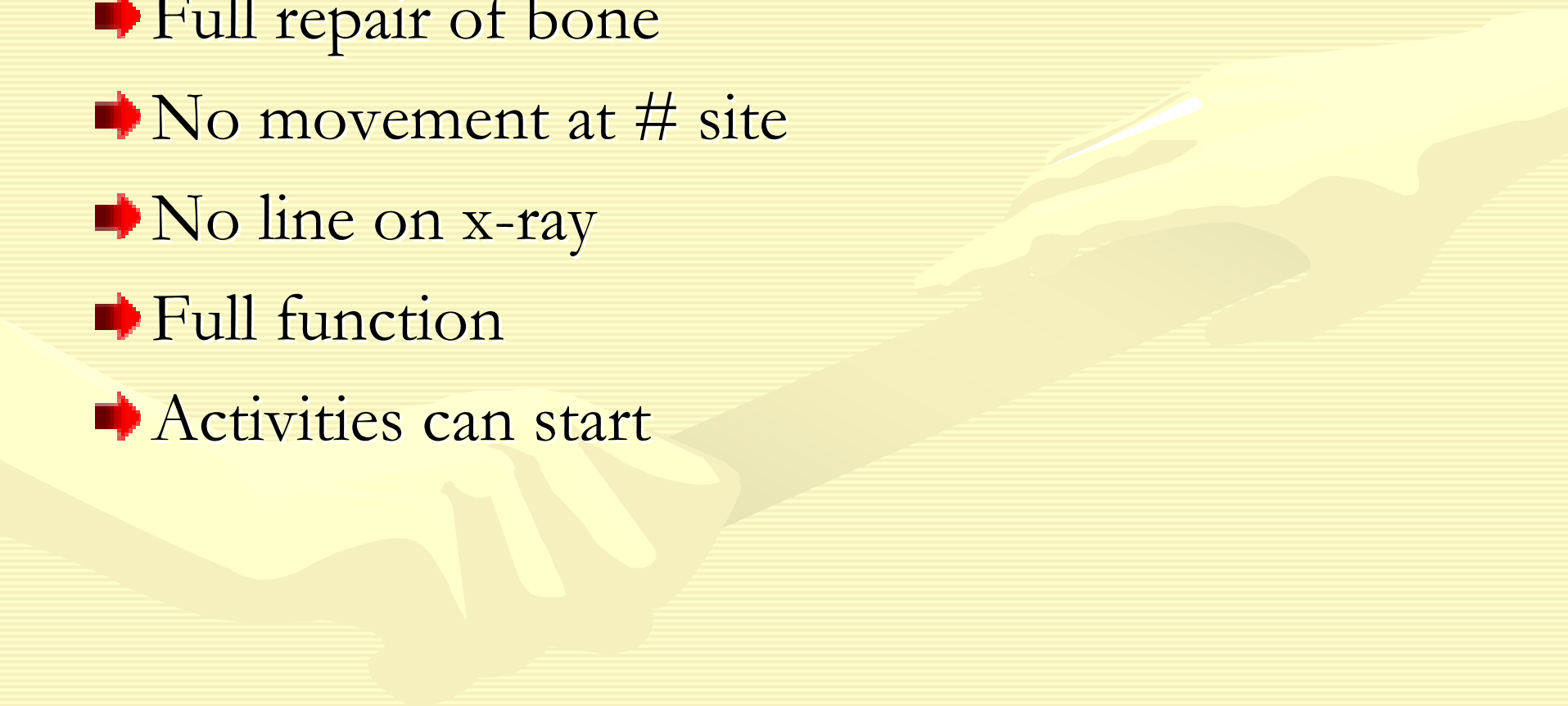


# HEALING TIMES

- 2 STAGES
  - UNION ( 3-10 WEEKS)
    - ➡ Partial repair of bone
    - ➡ Initial callus forms around the bone ends = minimal movement
    - ➡ Still painful
    - ➡ # line visible on x-ray
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# HEALING TIMES

- CONSOLIDATION ( Double union time )
  - ➡ Full repair of bone
  - ➡ No movement at # site
  - ➡ No line on x-ray
  - ➡ Full function
  - ➡ Activities can start



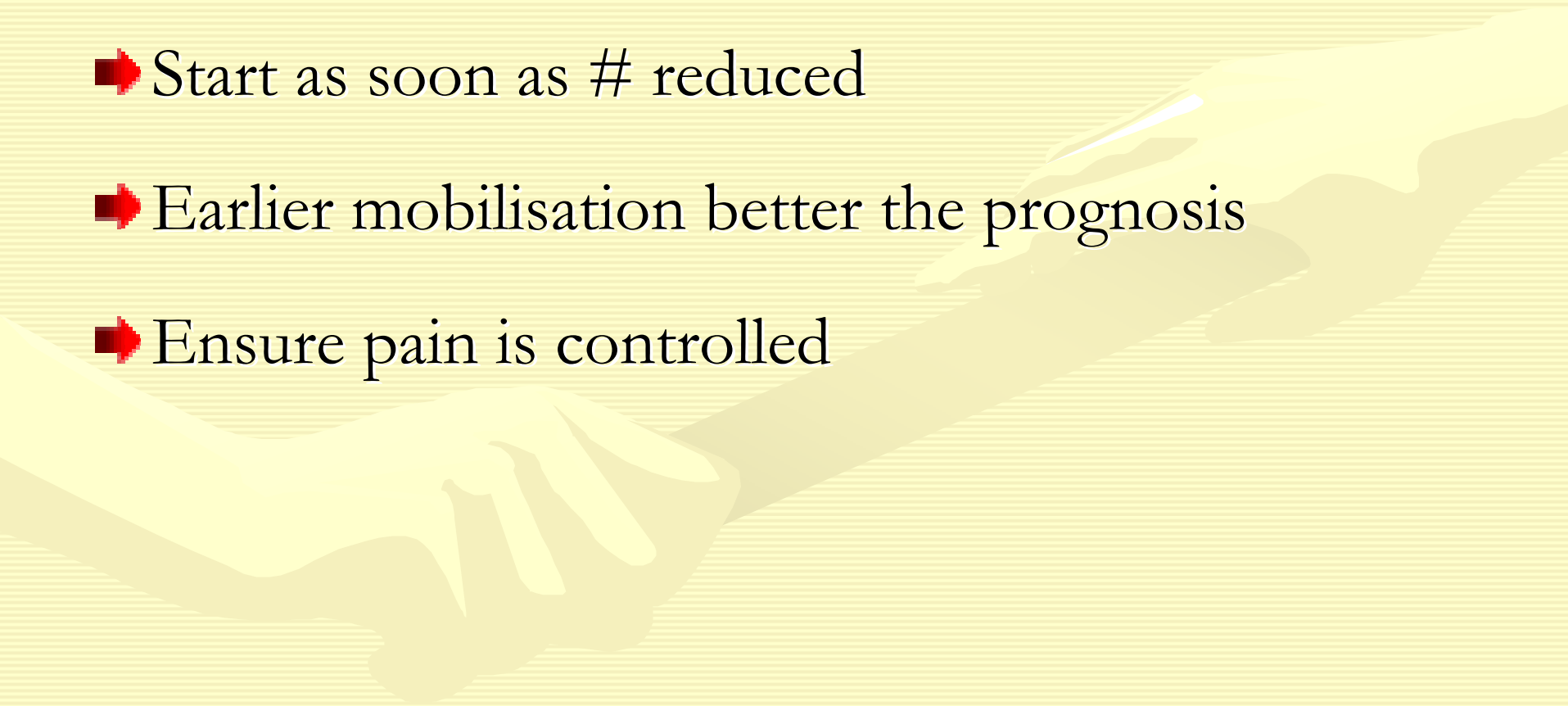
# EXAMPLES OF HEALING TIMES

- # Humerous
- 6-8 weeks union 12-16 weeks consolidation
- # Femur
- 3-6 months union 8-12 months consolidation
- # Tibia 8-10 weeks union 16-36 weeks consolidation

# IMMOBILISATION

- **Aim** to hold the bone in the correct reduced position by
- **Conservative** – POP-slings–traction–collar & cuff
- **External fixation** – Bone fragments held by external scaffolding
- **Internal fixation** – screws- plates- nails-wires

# REHABILITATION

- ➡ Return person to as full function as possible
  - ➡ Start as soon as # reduced
  - ➡ Earlier mobilisation better the prognosis
  - ➡ Ensure pain is controlled
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# COMPLICATIONS

- Delayed union # longer to heal than usual
- Non-union # does not unite in time frame
- Mal-union # unites in poor position
- Shortening of limb, muscle and bone
- Joint stiffness/contracture
- Infection
- AVN...avascular necrosis
- Osteoarthritis...fractures involving joints