

Physical Activity in Children Treated with Hematopoietic Stem Cell Transplantation

What is Hematopoietic Stem Cell Transplant (HSCT)?

HSCT is a procedure that involves using stem cells to rebuild bone marrow function

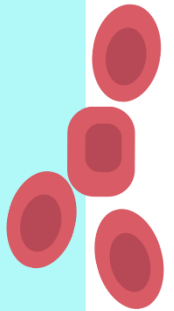


- Phases:
1. Conditioning
 2. Infusion
 3. Neutropenia
 4. Engraftment
 5. Post-engraftment

Side Effects vary depending on the phase of treatment

Side Effects of Hematopoietic Stem Cell Transplant (HSCT)

- Muscle wasting
- Fatigue
- Decrease appetite
- Vomiting, nausea & diarrhea
- Pain
- Immunosuppression
- Decrease heart & lung fitness



HSCT & Physical Activity (PA)

HSCT Complications

- Delayed immune recovery
- Heart & lung damage
- Decreased red blood cells
- Graft versus host disease

HSCT Effect on Fitness

- During treatment prolonged bed rest leads to:
- Decreased muscle
 - Decreased strength
 - Decreased cardiovascular fitness

Research shows that a moderate intensity and individualized PA program is possible, safe and does not negatively impact immune system recovery during HSCT



PA during a HSCT hospitalization period can maintain or even improve fitness condition

This is great news because usually fitness goes down

Refer to Ch 8 in the POEM Manual for Additional Information