Physical Activity in Children Treated with Hematopoietic Stem Cell Transplantation

What is Hematopoietic Stem Cell Transplant (HSCT)?

Side Effects of Hematopoietic Stem Cell Transplant (HSCT)

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



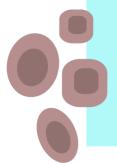
Phases:

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

Side Effects vary depending on the phase of treatment - Muscle wasting
-Fatigue
-Decrease appetite
-Vomiting, naseau & diarrhea
-Pain
-Immunosuppression



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