Effectiveness of Aerobic Exercise for Adults with Leukemia
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What are the most effective interventions for increasing strength and endurance in clients with leukemia experiencing functional decline?

**Levels**

<table>
<thead>
<tr>
<th>Quality Score</th>
<th>Intervention</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 1</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Bergenthal et al. (2014) | Compared standard care versus aerobic exercise with adults diagnosed with blood cancer | ++: Decrease in depression and fatigue  
? : Quality of life, physical functioning, overall survival, anxiety |
| Baumann et al. (2011) | Moderate exercise program (aerobic endurance training and ADL training) versus standard care (gymnastics, massages, and stretching) in that facility | + : Aerobic endurance  
+ : Strength |
| Furzer et al. (2016) | 12-week exercise rehabilitation vs. a delayed 12-weeks of usual-care | ++: Reductions in cancer-related fatigue  
++ : Increased cardiovascular fitness |
| Wehrle et al. (2018) | Endurance and resistance exercise | ++: Muscular strength capacity  
++ : Emotional function |
| **Level 2**   |              |         |
| Kenji (2016) | Analyzed standard care versus aerobic exercise using the Wii as virtual reality | + : Strength  
+ : Endurance  
++ : Psychosocial function |

**Limitations and Conclusions**

- Small samples
- Intensity and duration differences
- Inability to blind participants

**Bottom Line**

- Moderate strength and quality of evidence
- Aerobic exercise may benefit individuals with blood cancers.
- Aerobic exercise may improve emotional function.

**Recommendations**

- More research with larger samples
- Cost-effective adaptation of interventions are available.

**Activity Tracking Chart Example**

<table>
<thead>
<tr>
<th>Date</th>
<th>Duration</th>
<th>Distance</th>
<th>Client reported strength &amp; endurance</th>
<th>Therapist’s rated strength &amp; endurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/30</td>
<td>15 min</td>
<td>5 mile</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>5/1</td>
<td>25 min</td>
<td>1 mile</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>5/2</td>
<td>30 min</td>
<td>1 mile</td>
<td>8</td>
<td>6</td>
</tr>
</tbody>
</table>

**Handout**

**EBP Process**

- Consulted Practitioner-Mentor
- PICO Question Developed
- Searched Databases
- Analyzed/Appraised Articles
- Peer & Faculty Reviewed

**Search Methodology**

- **Databases**
  - Cochrane Library, CINAHL, Google Scholar, PubMed
- **Search Terms**
  - Leukemia patient, cancer intervention/treatment, strength/endurance, ADLs
- **Inclusion Criteria**
  - Blood cancer patients, adults; Published within last 10 years, English
- **Exclusion Criteria**
  - Comorbidities

**References**

Cochrane Library, CINAHL, Google Scholar, PubMed

++ = Positive statistically significant results  
+ = Positive results  
? = Inconclusive results  
- = Decline in results
Activity Tracking Graph Example

- Therapist Rating
- Client Rating