Commit to Be Fit! Round 2

A presentation for kidney transplant recipients

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Getting to Know Each Other

Who am I?
• Physiotherapist who works with persons with renal disease

Are you active?
• Exercise class
• Pool
• Housekeeping/Gardening
• Walking
• Not much
What is Physical Activity?

- Any movement of your body that results in the use of energy

- Daily tasks that involve some movement or physical exertion

- Examples: laundry, walking to the store, gardening, cleaning your home, climbing stairs…
What is Exercise?

• “Bodily exertion for the sake of developing and maintaining physical fitness”
  – Merriam Webster

• Dedicated time with the purpose of improving your strength, flexibility or endurance

• Examples: walking, cycling, aquafit, jogging, yoga, weight lifting, stretching etc.
Kidney Disease can cause...

- Weakness
- Brittle bones
- Fatigue
- High and low blood Pressure
- Increased resting heart rate
- Stress and anxiety
- Difficulty with every day activities
- Poor balance
- Poor sleep
- Less spare time
Time for a short video…

Youtube:
https://www.youtube.com/watch?v=SG7n2QiaMB8
Why is Exercise Important?

- Increases muscle mass and strength
- Improves heart function
- Weight management
- Improves energy levels
- Increases sleep quantity
- Improves sleep quality
- Improves blood sugar control
- Reduces anxiety and depression
- Improves physical functioning
- Improves overall quality of life
More about physical activity and the heart…

• People with kidney disease and those with transplants are at an increased risk of:
  • Cardiovascular disease (CVD) and cardiac events

• Almost 50% of post-transplant deaths are caused by CVD

• Transplant recipients who are more active:
  • Reduce their cardiovascular and all cause-mortality risks
What are the different types of exercises?

- Flexibility/Stretching
- Balance
- Strengthening
- Aerobic/Cardio

7
What are flexibility/stretching exercises?

- Any exercise that puts a little tension on our muscles and joints to help maintain or increase our flexibility.
Flexibility/Stretching – Tips

• You should feel a little tension

• Stretching should NOT be painful

• Do NOT hold your breath
Flexibility/Stretching – Let’s try it!

1. Scoot forward in your chair
2. While seated, please move your foot forward and straighten your knee
3. Place your hands on the opposite thigh
4. Lean forward, keeping that knee and your low back straight
What are balance exercises?

• Trains your brain, joints and muscles to steady yourself and prevent falls

• Can be done while trying to stay still or while moving
Balance exercise – Tips

• Should be a little challenging

• Ensure you have something to hold onto (chair or counter) and supervision if needed
Balance exercises – Let’s try it!

1. Stand up
2. Place both hands on the chair in front of you
3. Put your feet together
4. Try not to use your hands
5. Too easy? Try lifting one leg off the ground
What are strengthening exercises?

- Exercise that involve “flexing” your muscle against resistance
- Causes the muscle to rebuild stronger than it was before
Strengthening exercise – Tips

• Pay attention to form
• Control the resistance
• Do NOT hold your breath
• A little muscle soreness is ok but exercises should NOT cause pain
• Progress slowly increasing resistance only after a few weeks
Strengthening exercise – Let’s try it!

1. Stand up
2. Hold on to a chair in front of you for support/balance
3. Slowly bend at your hips and knees as if you are going to sit
4. Stand up straight
What is Aerobic/Cardio Exercise?

- Exercise that uses the large muscles in a repetitive way
- Helps keep your energy up by increasing the efficiency of your heart and lungs
Aerobic/Cardio Exercise – Tips

• Important to have a short warm up and cool down of around 5 minutes at a “light” pace

• Should be working “hard” during exercise
Aerobic/Cardio Exercise – Let’s try it!

1. Stand up
2. Hold on to a chair back if needed for balance
3. March on the spot – Can be done sitting as well
Standing Posture

CHECK YOUR POSTURE

BAD

GOOD
Seated Posture

- The top of your screen should be at eye level
- The chair should completely support your thighs
- Your legs should be bent in a 90- to 110-degree angle
- Your feet should be flat on the floor
- Make sure you relax your shoulders
- Your forearms should be parallel to the floor
- The chair should have a backrest that supports your lower back
What should I do?

Where do I start?
## Walking Program

<table>
<thead>
<tr>
<th>Level</th>
<th>Number of Walks</th>
<th>Minutes per Walk</th>
<th>Check When Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
<td>5</td>
<td></td>
</tr>
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<td>2</td>
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<td>28</td>
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<td>31</td>
<td></td>
</tr>
</tbody>
</table>
How hard should I work?

- Progress each exercise slowly to give our bodies time to adapt
- Rate of perceived exertion (RPE)
  - 1-2 during warm-up and cool down
  - 3-5 during exercise
- Walk and Talk test

<table>
<thead>
<tr>
<th>Rate of perceived exertion</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Nothing at all</td>
</tr>
<tr>
<td>1</td>
<td>Very light</td>
</tr>
<tr>
<td>2</td>
<td>Light</td>
</tr>
<tr>
<td>3</td>
<td>Moderate</td>
</tr>
<tr>
<td>4</td>
<td>Somewhat Hard</td>
</tr>
<tr>
<td>5</td>
<td>Hard</td>
</tr>
<tr>
<td>6</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Very Hard</td>
</tr>
<tr>
<td>8</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Extremely Hard</td>
</tr>
</tbody>
</table>
## RPE Scale for Kids

**RPE** stands for **Relative Perceived Exertion**. Relative Perceived Exertion means, “How hard do I feel I am exercising?” It is a tool you use to tell others how your body is feeling when you exercise. Kids who exercise in numbers 4-7 are getting moderate to vigorous exercise. That means your body is getting the right amount to be healthy! You should get 60 minutes of exercise in this range every day.

<table>
<thead>
<tr>
<th>My Number...</th>
<th>My Face...</th>
<th>This what I may be thinking...</th>
<th>This is what my body may be doing...</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong></td>
<td><img src="image" alt="GO" /></td>
<td>This exercise is the same as resting.</td>
<td>I am getting ready to exercise, but I don’t feel different yet.</td>
</tr>
<tr>
<td><strong>2</strong></td>
<td><img src="image" alt="Face" /></td>
<td>This exercise isn't hard.</td>
<td>I am getting a little hot. I can still talk normally.</td>
</tr>
<tr>
<td><strong>3</strong></td>
<td><img src="image" alt="Face" /></td>
<td>I am just beginning to feel like I am exercising.</td>
<td>I am feeling like my body is warming up.</td>
</tr>
<tr>
<td><strong>4</strong></td>
<td><img src="image" alt="Face" /></td>
<td>I am starting to feel like I am exercising. I feel good!</td>
<td>I can almost talk in a regular voice, but it is getting harder!</td>
</tr>
<tr>
<td><strong>5</strong></td>
<td><img src="image" alt="Face" /></td>
<td>This exercise is a good workout! I am really working hard.</td>
<td>My cheeks are getting pink. I am getting a little sweaty.</td>
</tr>
<tr>
<td><strong>6</strong></td>
<td><img src="image" alt="Face" /></td>
<td>I am exercising more than I thought. It is getting hard to do.</td>
<td>I feel like talking is getting harder – I have to stop sometimes for air.</td>
</tr>
<tr>
<td><strong>7</strong></td>
<td><img src="image" alt="Face" /></td>
<td>This is pretty hard. I can exercise a little bit longer, then I'll stop.</td>
<td>I am getting really sweaty. My body is hot!</td>
</tr>
<tr>
<td><strong>8</strong></td>
<td><img src="image" alt="Face" /></td>
<td>This exercise is really hard, but I'm not ready to quit.</td>
<td>I can talk a little, but not too much.</td>
</tr>
<tr>
<td><strong>9</strong></td>
<td><img src="image" alt="Face" /></td>
<td>I need a break from this very, very hard exercise!</td>
<td>My face looks red. I feel like I need to stop.</td>
</tr>
<tr>
<td><strong>10</strong></td>
<td><img src="image" alt="STOP" /></td>
<td>I'm exercising too much! My body is making me stop now!</td>
<td>My heart is beating very fast and strong. I can't talk.</td>
</tr>
</tbody>
</table>
How often and for how long should I exercise?

Optimally…
• Aerobic (walking, cycling etc.): 3-5d/week, 20-60min continuous or in 10min bouts
• Strengthening: 2-3 days/week, 1+ sets of 10-15 repetitions
• Flexibility & Balance: 2-5d/week, varies
STOP EXERCISING IF YOU FEEL...

- Light-headed
- Dizzy
- Headache
- Blurred vision
- Nausea
- Feeling “shaky”
- Confusion
- Difficulty breathing
- Chest pain
- Racing heart beat
- Leg cramps
- Severe/sharp pain
Exercising with a Kidney Transplant

- Receiving a kidney transplant does NOT:
  - Change your medical history including the consequences of CKD and dialysis
  - Limit your ability to exercise…
    - Contact sports should be avoided
Exercising with a Kidney Transplant

• Exercise and increased physical activity is recommended by multiple international groups

• Physical activity levels are low in transplant recipients
Exercising with a Kidney Transplant – 2017 Research

• Fatigue
  • Increased compared with general population
  • Negatively affects patient quality of life
  • Exercise reduces fatigue frequency and severity in patients with ESRD on hemodialysis
    • Recent research also shows exercise reduces fatigue levels in transplant recipients
Exercising with a Kidney Transplant – 2017 Research

Barriers to Exercise

- Lack of motivation
- Weather
- Preferring to spend time otherwise
- Fear of movement
- A lack of belief in yourself

Facilitators

- Health benefits
- Social support systems
Exercising with a Kidney Transplant

• TRANSPLANT GAMES
  • Canadian Transplant Games
  • World Transplant Games Federation

• Keys to success
  • Start small
  • Start simple
  • Recognize and remove your own barriers
Exercising with a Kidney Transplant

- Well-trained kidney transplant recipients are able to safely tolerate intense physical activity comparable to non-transplant controls…
  - 130km cycling marathon, uphill
  - Hike up Mount Kilamanjaro
Keeping Safe While Exercising – Transplant

• Medication side effects
  • New onset diabetes
  • Fine tremor
  • 10x skin cancer risk
  • Avoid dehydration to prevent kidney injury
  • Weight gain
  • Osteoporosis
  • Muscle wasting

*For more information please talk to your pharmacist
Keeping Safe While Exercising – Kidney Disease

• Watch your balance!
  • Poor sensation in your feet
  • Poor vision
  • Inner ear changes

• Avoid Falls
  • More brittle bones
  • Increase risk of fractures
  • Slower healing after injuries
Keeping Safe While Exercising – Existing Fistula or Graft

- If you have a **fistula** or a **graft**
  - Avoid any prolonged “bending” of your arm
  - Avoid heavy lifting (>20 lbs.)
  - Do not do anything that will compress your arm

- **STOP EXERCISING IF**
  - You notice PAIN, BLEEDING, or SWELLING at your line or fistula sites
Community Resources

- Community Centers (Toronto Parks & Recreation)
- Toronto Central Health Line
- OHIP clinics
- CCAC
- TRI – Diabetes and Cardiac Rehab
- Falls prevention programs
Warning

• Talk to your doctor if you have any questions or concerns
• Exercise does come with some risks which cannot be entirely eliminated
  • Musculoskeletal injuries
    • An appropriately designed program can prevent these
  • Cardiac concerns
    • Appropriate aerobic exercises will decrease the likelihood of cardiac events
Questions?