Exercise: What are the Important Questions to Ask?

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Objectives

- Review 3 recommended exercise components
- Discuss several exercise questions relevant to the Pulmonary population and provide answers
What are the **BEST** types of exercise to include in **MY** program?

**3 types**

1. **Aerobic**
   - Dynamic exercise that is continuous (or discontinuous) over a period of time (20-30 minutes) and frequency (3-6 days per week)
   - Examples:
     - Moderate speed walking or jog
     - Bicycle riding
     - Swimming or aquatic class
     - Land exercise classes: Yoga, Zumba, step class
     - Dancing classes: Salsa, Mambo, Merengue
     - Commercial DVD’s
     - Walking Clubs
What is Discontinuous Exercise?

- Interval Training
  - Training that alternates between bouts of vigorous exercise and low-intensity exercise or rest
  - Duration is the same or slightly longer as continuous aerobic exercise
  - When should I use this type of training?
    - When first beginning exercise
    - During recuperation from illness
    - On days when you feel **AWFUL!**
  - Do I get benefit from this type of training?
    - **YES!** Research has found this training to improve overall fitness, decrease body fat, and provide better glycemic control.
What are the **BEST** types of exercise to include in **MY** program?

- **2nd: Strength Training**
  - Weight machines
  - Dumbbells, cuff weights, stretchy bands
  - “Core” strengthening
  - Pilates using own body weight
  - Personal training
  - Individual or small group
  - Household items: cans, milk jugs, etc.
  - 2-3 non-consecutive days/week
What are the **BEST** types of exercise to include in **MY** program?

- **3rd**: Stretching
  - Pilates
  - Targeted stretching for problem areas
  - Posture
  - Balance: balance balls
  - 3 days/week
Shoe wear
- Purchasing good walking/running shoes is a **MUST!**

Hydration
- Take a water bottle
- Force yourself to drink one bottle during exercise

Nutrition
- Eat proteins, vegetables, and fruits and especially **Breakfast**
- Now isn’t the time to go on a crash diet!

Weight Loss
- Weight loss does occur, but only in combination with diet changes
- More commonly you will see body shape changes
Other Assistants

- Step counters
- Fitbit
- Garmin
Guiding Principles of Exercise

- **F.I.T.T. Principle**
  - Frequency: How often should I exercise?
  - Intensity: How hard should I exercise?
  - Time: How long should I exercise?
  - Type: What type of exercise should I do?
How Much Exercise is Safe?

Too Little
- Less than 2 days/week
- Only on weekends “Weekend Warriors”
- “Every once in a while”
- “When I feel up to it”
- When your heart rate and breathing rate DON’T increase during exercise (even if you have “a little” shortness of breath!)

Too Much
- Every day
- When you have muscle or joint pain, increased soreness, excessive fatigue
- When you can’t breathe or talk during exercise
- If you have chest discomfort or pain during exercise
- If you feel light-headed, faint, or de-hydrated during exercise
If you find yourself getting bored, change the type of exercise…try a dance class!

**When you notice a moderate increase in breathing (memorize a perceived exertion chart and use it!)**

When your heart rate increases (up to ~20 beats)

Use the "Talk Test" if exercising with someone else

When you find at least some pleasure and satisfaction out of the task

How much Exercise is “Just Right”? 
Perceived Exertion Chart

Modified Borg Dyspnoea Scale

<table>
<thead>
<tr>
<th>Scale</th>
<th>Description</th>
<th>RPE Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>NOTHING AT ALL</td>
<td>0 Rest</td>
</tr>
<tr>
<td>0.5</td>
<td>VERY, VERY SLIGHT (just noticeable)</td>
<td>1 Extremely Easy</td>
</tr>
<tr>
<td>1</td>
<td>VERY SLIGHT</td>
<td>2 Very Easy</td>
</tr>
<tr>
<td>2</td>
<td>SLIGHT</td>
<td>3 Easy</td>
</tr>
<tr>
<td>3</td>
<td>MODERATE</td>
<td>4 Moderate</td>
</tr>
<tr>
<td>4</td>
<td>SOMEWHAT SEVERE</td>
<td>5 Somewhat Hard</td>
</tr>
<tr>
<td>5</td>
<td>SEVERE</td>
<td>6 Moderately Hard</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>7 Hard (-LT)</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>8 Very Hard</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>9 Very, very hard</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>10 Extremely Hard – max!</td>
</tr>
</tbody>
</table>
How Can I Manage My Oxygen With Exercise?

MOST IMPORTANT……..

- Use a Finger oximeter!
- Your oxygen need will go up as you exercise; as muscles work harder and require more oxygen
- Know how much oxygen you need at your greatest exercise levels
- Work with your Doctor and Home Care Company to obtain the smallest, highest flow portable system available
- Consider using a backpack for best ergonomics
What Can I Realistically Expect to Gain From Exercise?

- Physiology of Muscle Changes
  - Improved ability to manufacture energy currency “ATP” for work
  - Increased size and number of mitochondria
  - Less lactic acid produced
  - Increased myoglobin
  - Increased ability to use lipids (cholesterol) from blood
  - Increased energy manufactured from fats
  - Improved ability to extract oxygen from blood
  - Increased number of oxidative muscle fibers
What Can I Realistically Expect to Gain From Exercise?

- **Physiology of Heart Changes**
  - Lowers blood pressure
  - Lessens risk of developing diabetes
  - Lowers blood pressure
  - Improves strength of heart muscle
  - Pushes out more blood per beat, allowing heart rate to be slower
  - Better blood flow in the small vessels within the heart
  - Regular exercise helps your body make more blood vessel branches and connections “collateral arteries”
What Can I Realistically Expect to Gain From Exercise?

- Physiology of Lung Changes
  - Improves strength of the respiratory muscles, especially the diaphragm
  - Due to improvements, muscles require less oxygen and produce less carbon dioxide at a given work load; thus less work on the respiratory system
  - De-sensitization to shortness of breath
  - **Regular exercise **DOES NOT substantially change pulmonary function
  - Once lung damage occurs, it is irreparable, just as within the heart
What Can I Realistically Expect to Gain From Exercise?

Other Changes
- Increases levels of “good” cholesterol (HDL lowers heart disease risk by flushing “bad” LDL cholesterol out of vessels)
- Keeps weight down
- Improves mood
- Lowers risk of some cancers
- Improves balance
- Reduces risk of osteoporosis
- Promotes better sleep
- Ultimately gives you more energy
Types of Exercise Oxygen Tanks
ANY

QUESTIONS?