Post Stroke Community Based Exercise Guidelines:
What’s New for 2016

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Alda Tee, Regional Community and LTC Coordinator, CESN

MAY 2, 2016
Objectives

• Review the role of exercise in secondary prevention and post stroke recovery.
• Provide an overview of the updated Post Stroke Community Exercise Guidelines.
What We Know

• Increase in strokes among people under 65
• Increase in all stroke risk factors for younger adults
• More people are surviving stroke
• Leading cause of adult disability

• 2015 Heart and Stroke Foundation
• For many stroke patients and their families, the real work of recovery begins after formal rehabilitation.

(Duncan et al, 2005)
Figure 2. VO$_{2peak}$ for stroke subjects vs. normative data for general population.

Mean VO$_{2peak} = 15.1$ mL$\cdot$kg$^{-1}$$\cdot$min$^{-1}$.

Rimmer & Wang, 2005
Secondary Prevention

Helping to break the cycle of deteriorating health status resulting from inactivity

Rimmer & Wang, 2005
“Need to integrate people with a disability. Community has to understand. People are scared of us, of our disability.”
- Community forum participant

“The … program fits into his goals of increasing access to community facilities and programs, …every little bit helps for people like him who face huge neurological and physical challenges.”
- Caregiver
Facilitating Community-Based Exercise for People With Stroke: Cross-Sectional e-Survey of Physical Therapist Practice and Perceived Needs

Carrie Lau, Danielle Chitussi, Sarah Elliot, Jennifer Giannone, Mary-Katherine McMahon, Kathryn M. Sibley, Alda Tee, Julie Matthews, Nancy M. Salbach
Background: Community Exercise Guidelines

2008
• Community consultations
• Best Practice

2010
Community Exercise Guidelines for People with Stroke

2014
Update process

2016
Post Stroke Community Exercise Guidelines
Update Process

• Provincial
• Physiotherapists, Kinesiologists, Recreation Providers, Recreation Therapist, Educators

Working Group

Update Phase
• Literature Review
  • Best Practices
  • QBP Module 9
  • Research

External Review
• Persons with Stroke
• End Users
• Researchers

Final Revisions
• Feedback incorporated
• Final Edits
• Release

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Literature Review
Benefits of increased physical activity:
- Decreased social isolation and depression
- Improved fitness, balance and mobility
- Improved CV health

Quality Based Practices
- Promotion of Physical Activity
- Participation in:
  - Physical Activity
  - Aerobic Exercise
  - Task Oriented Training

Canadian Stroke Best Practice Recommendations
- Risk of stroke of recurrent stroke
- Participation in moderate exercise
- Accumulation of 150 mins of moderate exercise/week

Other Guidelines
- All patients following (stroke or TIA) should be considered for potential participation in aerobic exercise interventions
- AEROBIC Guidelines
- CSEP Guidelines
- C-CHANGE
- Cardiac Care Network (CCN) Guidelines
- Canadian Fitness Safety Standards
What Remains the Same...

**Intent**
- Build capacity for safe, feasible exercise programming in the community
- Leverage existing successful programs
- Present latest research, best practice, link to resources

**Target Audience**
- Exercise providers across multiple settings
- Includes: fitness instructors, recreation programmers, health care professionals

**Guidelines**
- 8 overarching guidelines remain unchanged
- Format – statement, rationale and resources

**Target Population**
- Mild to moderate stroke living in community or residential settings
What’s New...

- **Executive Summary**: Added
- **Appendices**: Expanded
  - Examples of Resources
  - Practical Tools
  - Glossary of Terms
- **Guidelines**: Updated
  - Expanded content
- **Brochure**: Updated

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Guideline Format

• Guideline Statement
• Rationale
• Resources & Additional Considerations
  • Links to resources
• Appendices of resources
# The Guidelines

## Supporting Safe Participation
- Medical Clearance
- Screening by Exercise Provider

## Program Delivery
- Class Structure & Supervision
- Exercise Program Principles
- Program Evaluation

## Facility Level
- Facility
- Exercise providers
- Emergency procedures
GUIDELINE #1: MEDICAL CLEARANCE

Persons living with the effects of stroke should consult with a health care professional (e.g., physician or nurse practitioner) to undergo medical screening before participating in any exercise program to ensure that there are no conditions that would be contraindicative to participating in the exercise program.
<table>
<thead>
<tr>
<th>Rationale</th>
<th>Resources / Additional Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Higher Risk Group&lt;br&gt;• Information to physician about program&lt;br&gt;• Information from physician on medical conditions that may impact participation, precautions and/or contraindications</td>
<td>• Stress test – when &amp; why&lt;br&gt;• Screening tool contents&lt;br&gt;• Links to forms</td>
</tr>
</tbody>
</table>
GUIDELINE # 2: SCREENING BY EXERCISE PROVIDER

A formal screening process should be conducted by the exercise provider to ensure a match between the program and the participant and to ensure that the participant meets program eligibility. Screening processes should include a range of procedures including individual participant intake interviews, a review of health information from the physician/other referring health care providers as well as a review of functional ability and the need for other considerations.
GUIDELINE # 2
SCREENING BY EXERCISE PROVIDER

<table>
<thead>
<tr>
<th>Rationale</th>
<th>Resources and Additional Considerations</th>
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</table>
| • Wide range & degree of impairments  
  • Capacity of facility & providers | • Sample intake assessment questions in 13 domains  
  • Inclusion/exclusion criteria |
GUIDELINE #3: CLASS STRUCTURE & SUPERVISION

The exercise class/program (e.g., seated class, exercise in water) should be structured to meet the needs of the targeted population. The participants may be fully able to walk, able to walk with assistance, walk with assistive devices or may be unable to walk. The targeted population should also be reflected in the inclusion/exclusion criteria used in the intake process. Consideration should be given to staffing ratios, volunteer availability, the degree of impairment and each participant’s need for assistance.
GUIDELINE #3  
CLASS STRUCTURE & SUPERVISION

<table>
<thead>
<tr>
<th>Rationale</th>
<th>Resources/Additional Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Frequency/duration of classes</td>
<td>• Canadian Fitness Safety Standards</td>
</tr>
<tr>
<td>• Needs of participants</td>
<td>• Pre-class preparation for participants</td>
</tr>
<tr>
<td>• Staff/client ratio</td>
<td>• Checklist</td>
</tr>
<tr>
<td>• Venue capacity</td>
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GUIDELINE #4
EXERCISE PROGRAM PRINCIPLES

The exercise program should incorporate established training principles and include specific components to address the needs of people living with the effects of stroke. Functional activities should be emphasized. It is also recommended that the exercise providers integrate health promotion information into the classes.
GUIDELINE #4
EXERCISE PROGRAM PRINCIPLES

<table>
<thead>
<tr>
<th>Rationale</th>
<th>Resources/Additional Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Posture &amp; alignment</td>
<td>• Exercise Class Components:</td>
</tr>
<tr>
<td>• Task related training</td>
<td>• Aerobic</td>
</tr>
<tr>
<td>• Specificity</td>
<td>• Stretching</td>
</tr>
<tr>
<td>• Progressive overload</td>
<td>• Strengthening</td>
</tr>
<tr>
<td>• F.I.T.T. Principles</td>
<td>• Balance &amp; coordination</td>
</tr>
<tr>
<td>• Adapting equipment</td>
<td>• Stroke-specific exercise programs</td>
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GUIDELINE #5
PROGRAM EVALUATION

Program evaluation processes should be in place in order to monitor program successes and challenges and to track service delivery, staffing levels and participant satisfaction.
GUIDELINE #5: PROGRAM EVALUATION

<table>
<thead>
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<tbody>
<tr>
<td>• Safety</td>
<td>• Linking to relevant tests</td>
</tr>
<tr>
<td>• Effectiveness</td>
<td>• Linking to local resources</td>
</tr>
<tr>
<td>• Participant outcomes</td>
<td></td>
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<tr>
<td>• Satisfaction</td>
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GUIDELINE # 6: EXERCISE PROVIDERS

The exercise provider should ensure that fitness instructors are trained (and provided with updated information as needed/requested) to deliver programs meeting the needs of people living with the effects of stroke. Exercise providers may receive certification from a variety of organizations. It is critical that all exercise providers work within their scope as defined by the relevant certification program and insurance coverage parameters. It is recommended that exercise providers establish linkages with health care providers who can offer ongoing support and stroke-specific expertise as required.
GUIDELINE # 6: EXERCISE PROVIDERS

<table>
<thead>
<tr>
<th>Rationale</th>
<th>Resources /Additional Considerations</th>
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</thead>
<tbody>
<tr>
<td>• Residual impairments (physical, cognitive, communication) require a specific skill set both soft and hard skills</td>
<td>• Canadian Fitness Safety Standards</td>
</tr>
<tr>
<td>• Multi-factorial nature of stroke</td>
<td>• Links to Stroke Specific Fitness Instructor Education Resources</td>
</tr>
<tr>
<td>• May impact on movement, walking, joint stability, balance, activities of daily living, communication, understanding and mood</td>
<td></td>
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GUIDELINE #7: FACILITY

The exercise provider should offer participants a general orientation, an appropriate training environment and accessible facilities that meet the needs of the participants including barrier-free access to equipment and to the facility in general.
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<thead>
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</thead>
<tbody>
<tr>
<td>• Accessibility</td>
<td>• AODA</td>
</tr>
<tr>
<td>• Environment</td>
<td>• Accessibility Standards</td>
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<tr>
<td>• Transportation</td>
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<tr>
<td>GUIDELINE #8</td>
<td>EMERGENCY PLAN &amp; EQUIPMENT</td>
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The exercise provider should have an emergency plan that is documented and known to all exercise providers which includes requirements for current CPR and first aid certification, phone access to Emergency Medical Services and a source of glucose (e.g. juice box). The presence of an Automatic External Defibrillator (AED) is highly recommended.
GUIDELINE #8: EMERGENCY PLAN & EQUIPMENT

<table>
<thead>
<tr>
<th>Rationale</th>
<th>Resources &amp; Additional Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Response to emergency</td>
<td>• AODA</td>
</tr>
<tr>
<td>• AED</td>
<td>• Canadian Fitness Safety Standards</td>
</tr>
<tr>
<td></td>
<td>• Symptom response</td>
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</table>
Signs of Stroke

FACE is it drooping?

ARMS can you raise both?

SPEECH is it slurred or jumbled?

TIME to call 9-1-1 right away.

ACT FAST BECAUSE THE QUICKER YOU ACT, THE MORE OF THE PERSON YOU SAVE.

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This brochure can be found at:

www.ontariostrokenetwork.ca
For More Information

www.ontariostrokenetwork.ca
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References

