

# Promoting physical activity for mental health: The state of the evidence and practical tips



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# Session Goals

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- ❑ To expand knowledge on the evidence of promoting physical activity within primary care
- ❑ To learn practical evidence-based strategies for promoting physical activity within primary care
- ❑ To take away a practitioner decision guide and client tip sheet for promoting physical activity



# Defining Physical Activity

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## □ **Physical Activity:**

- “any bodily movement produced by skeletal muscles that results in energy expenditure” (National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, 1997)

## □ **Exercise:**

- Type of physical activity that is planned, structured and done with the goal of improving physical fitness (i.e., strength, flexibility or aerobic endurance)



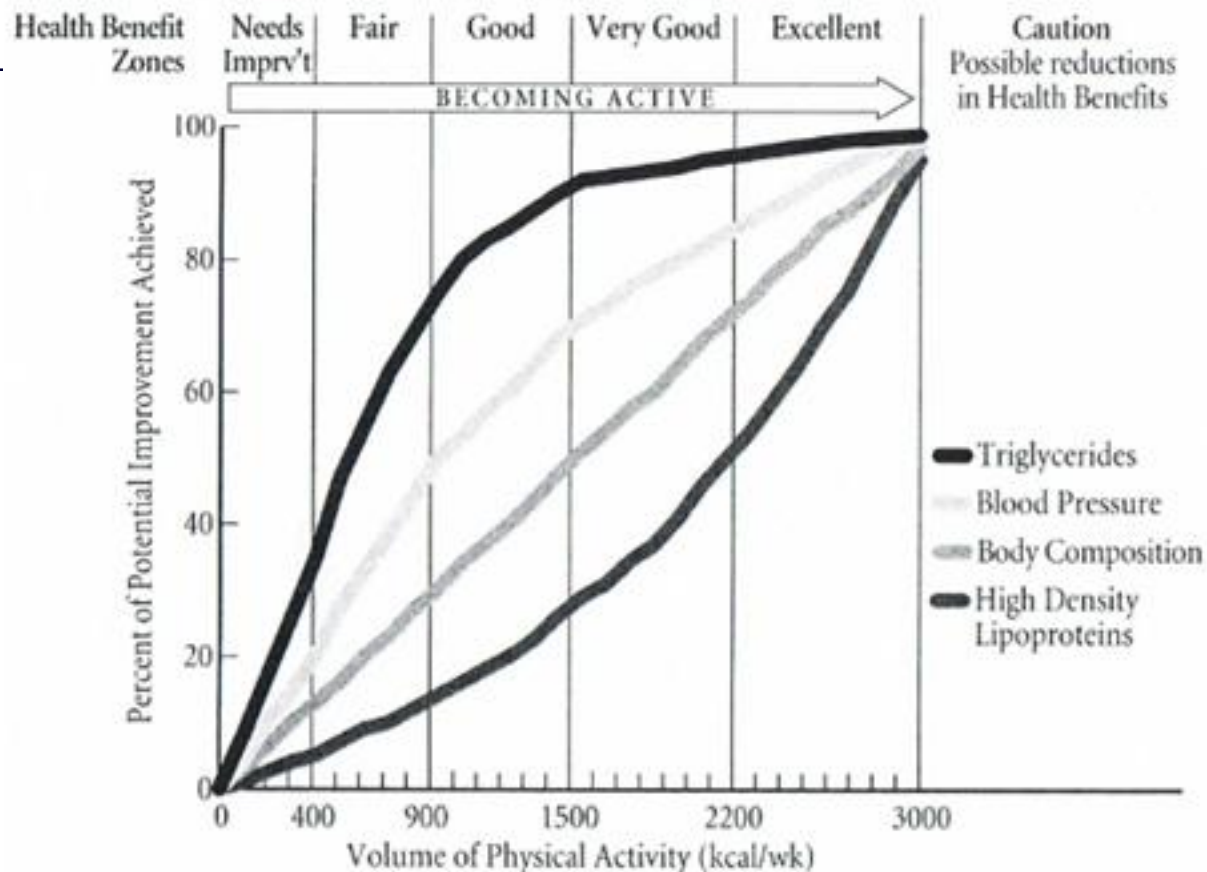
# Physical Health Benefits

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- Weight management and reduction
- ↑ Fitness and muscle strength
- ↑ Immune functioning
- ↓ Cardiovascular disease risk
- Prevention and management of hypertension
- ↓ Stroke risk
- ↓ Cancer risk (colon, breast)
- ↑ Cognitive functioning
- Prevention and management of Type 2 diabetes
- Osteoarthritis management (e.g., pain control, maintenance of muscle strength)
- ↓ Osteoporosis risk
- ↓ Falls risk in elderly (with resistance exercises)

## FIGURE 4-1 DOSE-RESPONSE RELATIONSHIP

### *and Health Benefit Zones for Health Benefits and Volume of Physical Activity Participation*



Note: To achieve improvements in many health benefit indicators, the volume of physical activity participation can be attained through any combination of frequency, intensity and duration, but improvements in Aerobic Fitness and Strength can only be achieved by working above a threshold intensity for an appropriate frequent and duration.

Schematic developed by N. Gledhill and V. Jamnik, York University.



# Decrease Cancer Risk

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- Sedentary lifestyle attributes to 5% of cancer risk (Harvard Report on Cancer Prevention, 1996)
- Breast cancer
  - Reduced risk of 14-23%, especially if active before menopause; at least 1.25 hr/wk brisk walking (Maruti, 2008; McTiernan 2003)
- Colon cancer
  - 24% reduction comparing least to most active (Wolin et al., 2009)



# Physical Activity and Type 2 Diabetes

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- Prevention
  - RR 0.70 for moderate activity level (2.5 hr/wk brisk walking) (Jeon et al., 2007)
- Management
  - Increased insulin sensitivity (Devlin, 1992)
  - Improved glucose control (Boule, 2001)
- Complication reduction
  - Women with T2 DM with 4 hrs/wk of moderate or vigorous exercise had 40% lower risk of developing cardiovascular disease (Hu et al., 2001)



# Psychological and Other Benefits

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- ❑ **Prevention and management of anxiety and depression**
- ❑ Management of stress
- ❑ ↑ self-concept and self-efficacy
- ❑ ↑ health-related quality of life
- ❑ ↓ delinquency, risky behaviours and ↑ in educational progress
- ❑ Meet new people, increased social contact
- ❑ Improved ADHD symptoms





# Role in Anxiety and Depression

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- ❑ Women not engaged in regular activity twice as likely to develop depression (Farmer et al., 1988)
- ❑ Exercise training as effective as antidepressant (Blumenthal et al. 1999; 2007) and cognitive therapy (Greist et al. 1979, Fremont et al., 1987)
- ❑ Meta-analyses indicate effect size of .46-.99 examining exercise at reducing anxious symptoms (Petruzzell et al 1991, Stich, 1998)



# Potential Mechanisms

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- *Biochemical & physiological changes: e.g., endorphins; changes in the serotonergic systems*
- *Improvements in fitness and weight loss: the feeling that the body is fitter or more 'toned'*
- *Mastery and adaptive action: increases in self worth, personal control and adaptive action*
- *Normalization of sleep and regulation of mood*
- *Distraction: time away from stress*
- *Social interaction and sense of belonging: collective experience of being active as a group*
- *Social and cultural value: 'virtuous' activity, therefore, may increase self-esteem*

( NHS Health Scotland 2008; Smits & Otto, 2009)



# Importance of Physical Activity for Clients with Mental Health Problems

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- ❑ Elevated rates of premature death among chronically mentally ill (Dembling et al., 1999)
- ❑ People with mental illness exhibit fewer health behaviors (e.g., exercise less, smoke more, etc.) (McCreadie et al., 1998; Brown et al., 1999)
- ❑ Many individuals may be taking medications that increase weight gain
- ❑ Physical activity can be an alternative or complimentary treatment approach (Smits & Otto, 2009)



# Canadian Physical Activity Guidelines

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## □ **Youth**

- 90 minutes daily activity
  - 60 minutes moderate + 30 minutes vigorous

## □ **Adults**

- 60 minutes low-intensity daily activity
- OR
- 30 to 60 minutes moderate daily activity

## □ **Older Adults**

- 30 to 60 minutes moderate daily activity



# Types of Physical Activity

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- **Endurance (4-7 days per week)**
  - Continuous activities that make you breath deeper and increase your heart rate
  
- **Flexibility (4-7 days per week) \***
  - Reaching, bending and stretching
  
- **Strength and Balance (2-4 days per week)**
  - Lifting weights or own body, resistance activities
  
- **Warm-up (pre), cool-down (post), and stretching (post)**



# Intensity of Physical Activity

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- **Light effort**

- Light walking, stretching, or easy gardening

- **Moderate effort**

- Brisk walking, raking leaves, or biking

- **Vigorous effort**

- Aerobics, jogging, or fast swimming or biking



# Physical Activity Participation Rates

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- ❑ More than half of Canadians are inactive and even more are not sufficiently active
- ❑ Lower rates among underprivileged and culturally diverse groups
- ❑ Rates of physical activity decrease with age



# Physical Activity Guidelines for Mental Health Treatment

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In bouts of at least 25 minutes, 3-5 days a week:

- Moderate-intensity for minimum of 150 minutes (i.e., 2 hours and 30 minutes) weekly

Or

- Vigorous-intensity for minimum of 75 minutes (i.e., 1 hour and 15 minutes) weekly

(Smits & Otto, 2009)





# Barriers to Physical Activity

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- ❑ Not enough time
- ❑ Low motivation
- ❑ Low social support
- ❑ Tired
- ❑ Responsibilities (e.g., family, job)
- ❑ Chronic condition/Poor health
- ❑ Fear of worsening health condition
- ❑ Lack of knowledge
- ❑ Disinterest
- ❑ Low confidence
- ❑ Fear of falling
- ❑ Inaccessibility
- ❑ Environmental constraints (cold, dark, not safe)
- ❑ Too old



# Promotion of Physical Activity in Primary Care: Why it is Important

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- Patients need help with behaviour change
- Health providers are a preferred source of health information
- Health providers have high population reach

*(Blair et al., 1998; CIHI, 2003; Petrella & Lattanzio, 2002)*

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*we're...  
NOW, SERIOUSLY - what  
can we do to  
lose weight!?*



ED FISCHER

A NEWS B  
MANY  
MILLIONS  
OBESE  
FREE



# Target Clients

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- ❑ Almost all clients, particularly those who are inactive and have health or mental health conditions/risk factors
- ❑ Higher-risk clients may require more monitoring
- ❑ Contraindications: unstable condition (e.g., uncontrolled hypertension)



# Promotion of Physical Activity in Primary Care: Evidence

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- Asking and advising is not sufficient
- Clients need
  - Tailored, specific advice
  - To be active in process
  - Follow-up support
- Brief PA counselling interventions (~3 minutes) have modest benefits
- Providing a written PA prescription is more effective than verbal advice alone
- Longer, collaborative PA counselling are more effective than brief, prescriptive interventions; this often means multi-provider
- Approach that emphasizes client choice and autonomy is most effective
- Evidence is consistent with the 5 As Model

(Estabrooks & Glasgow, 2006; Petrella & Lattanzio, 2002; Whitlock, Orleans, Pender, & Allan, 2002)



# The 5 As approach

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- Assess
  - PA level, health risk, abilities, readiness to change
- Advise
  - Personal health risks/benefits, FITT
- Agree
  - Collaboratively set goals and develop action plan
- Assist
  - In overcoming barriers, linking with community resources
- Arrange
  - For follow-up assessment, feedback, support



# The 5 As approach: Assess

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- Assess current physical activity behaviour
  - Moderate activity = e.g., brisk walking – noticeable increase in heart rate but can still carry on a conversation
  - Vigorous activity = e.g., running – substantial increase in heart rate and difficulty carrying on a conversation
  
- Assess physical activity readiness
  - Rule out contraindications
    - E.g., Physical Activity Readiness Questionnaire (PAR-Q)
  - If contraindications, refer for additional evaluation/treatment
  
  - Example Question:
    - Do you do moderate-intensity physical activity for 150 minutes or more (i.e., 2 hours and 30 minutes) each week OR vigorous physical activity for 75 minutes or more (i.e., 1 hour and 15 minutes) each week?
  
- If no contraindications to PA, assess readiness to change behaviour



# The 5 As approach: Assess Readiness to Change

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**Question:** Are you currently physically active (according to last slide). If not, have you considered starting to do moderate-intensity physical activity for 150 minutes or more OR vigorous physical activity for 75 minutes or more each week?

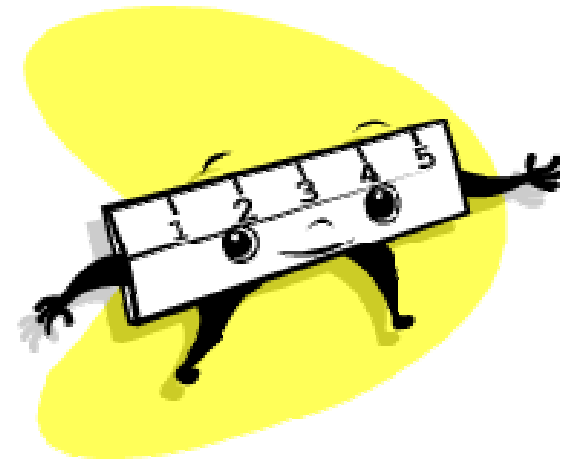
1. Active (NOW, FOREVER)
  - Yes, I am
2. Inactive but ready to change (SOON, SOMEDAY)
  - No, but I intend to
3. Inactive but not ready to change (NEVER)
  - No, and I do NOT intend to in the next 6 months.



# Using Scaling Questions

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- Scaling questions are a quick way to understand how an individual is feeling about the importance of change and their confidence in their ability to make the change.
- “On a scale of 1 to 10...”





# Inactive, Not Ready to Change (Precontemplation)

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- Person is not aware of a problem
- Family and friends may be aware and push for treatment
- Resistance to change is common
- Clients motivated by increasing awareness of the problem and emotional reasons

## YOUR TASK:

- Assess
- Advise there is a problem – As your provider, I feel I should tell you...
  - Review reasons why PA is important for client
  - Recommend client considers starting PA
  - Have client list possible benefits/barriers
- Arrange – Follow-up at next visit
  
- Resources to offer: PA guide?



# Inactive but Ready to Change (Contemplation, Preparation)

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- Aware that a problem exists
- May or may not be committed to take action
- Change may or may not have been initiated
- Currently weighing the pros and cons of action

## YOUR TASK:

- Assess
- Advise client increase PA
  - Have client list benefits/barriers
  - help client weigh the pros and cons and understand the relevance of the behavior to their life (5Rs)
  - Provide prescription
- Agree and Assist
  - Help client choose activities, sources of support
  - Positively reinforce intention and gradually increasing change
- Arrange follow-up (e.g., appointment, phone call, postcard/letter, referrals)
- Resources to offer: PA guide, Factsheet, list of community resources, Pedometer



# Decisional Balance

	<b>Good Things</b>	<b>Not-So Good Things</b>
<b>Current Behaviour</b>		
<b>Change</b>		



# Active (Action, Maintenance)

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- Time and energy has been committed to the behavior
- Lifestyle and environment have been modified to promote continuation
- Works toward preventing relapse and consolidating gains

## YOUR TASK:

- Assess
- Advise, Agree, and Assist
  - Reward and support continued participation
  - Review current PA (ask for examples) and goals & advise on modifications (FITT – Frequency, Intensity, Type, and Time; Warm-up, Cool-down, Stretching)
  - Discuss sources of support and barriers
  - Normalize “slips” and support getting back on track
- Arrange - Follow-up next visit
  
- Resources to offer: PA guide, Factsheet, list of community resources, Pedometer

# Prescription/Action Plan for Physical Activity

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- ❑ Consider client's barriers, needs, readiness, and preferences
- ❑ List client goals in behavioural terms
- ❑ Specify FITT
- ❑ List barriers/solutions
- ❑ Specify follow-up plan
- ❑ Share plan (e.g., put on chart)

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“ What if there was **one prescription** that could **prevent and treat** dozens of diseases, such as diabetes, hypertension and obesity? ”





# Follow-up Treatment Options

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- Schedule follow-up appointment
- Refer to additional provider
  - Psychologist or counsellor
  - Physiotherapist
  - Occupational Therapist
  - Certified Exercise Physiologist or Personal Trainer
- Promote self-management

# Top Five Tips for Increasing PA

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- ❑ Plan ahead
- ❑ Start slow & gradually increase
- ❑ Do something you enjoy
- ❑ Build it into your life
- ❑ Get family and friends involved







# Goal Setting Tips

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- ❑ *Specific* - Make goals specific and concrete
- ❑ *Important* - Make goals important
- ❑ *Realistic* – Make goals realistic
- ❑ *Schedule* - Schedule your goals. Write them down, tell others about them
- ❑ *Review* - Review your goals often



# Example Goals

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## □ Bad Goal Examples

- *Ready but not active:* I will go to the gym 4 times a week

## □ Good Goal Examples

- *Ready but not active:* I will take a 10 minute walk 2x/week in my neighbourhood in the morning before work

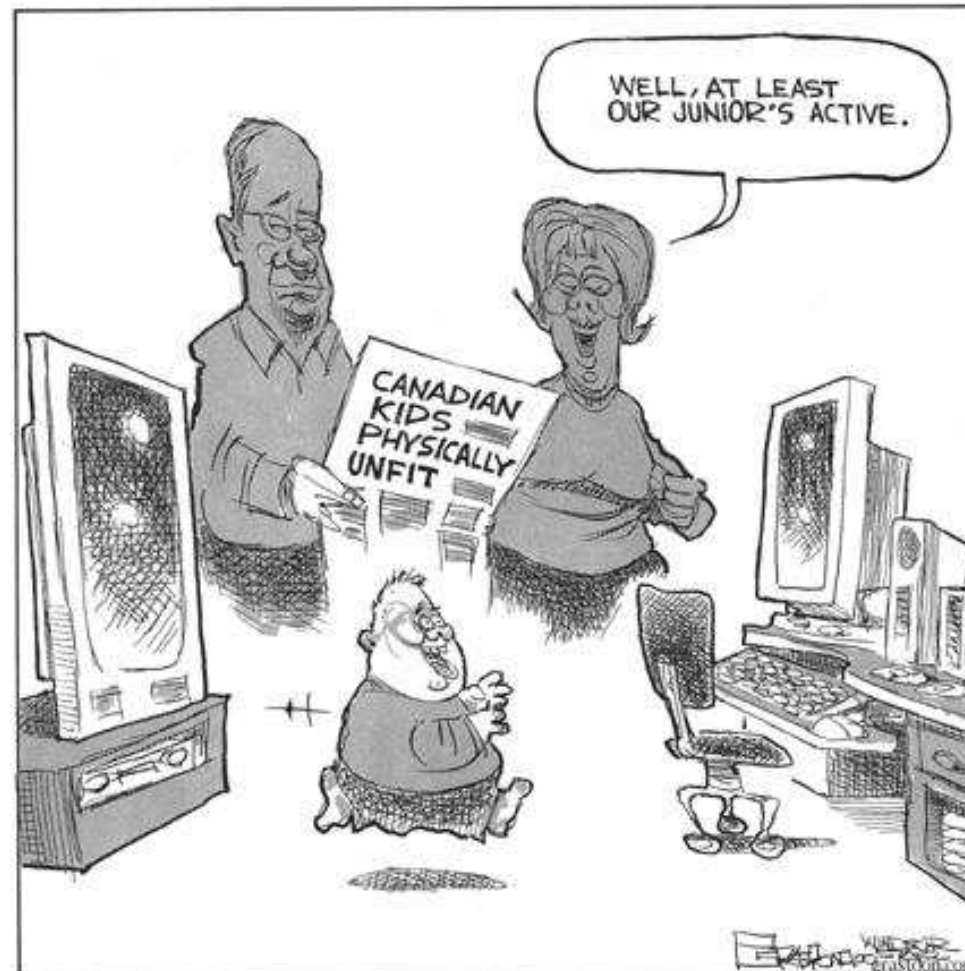
[www.StrangeCosmos.com](http://www.StrangeCosmos.com)



# Putting it into Practice

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# Promoting PA in Young People



# Promoting PA in Older People

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# Promoting PA in Patients with Chronic Disease

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- Consider restrictions related to condition (e.g., heart disease, osteoarthritis, COPD)
- Consider specific disease specific anxieties such as increased pain, low BGL, recurrence of heart attack



# Promoting PA in those with mental health concerns

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- ❑ Address concerns that feeling breathless from activity may mimic anxiety symptoms
- ❑ Start with small, realistic activities (titration!)
- ❑ Address social anxiety concerns





# Challenges to Promoting PA Within Primary Care

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- ❑ Limited time
- ❑ Limited knowledge
- ❑ Client motivation



# Concluding Thoughts

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- ❑ Use multiple sessions to assess and promote PA (Assess, Advise, Agree, Assist, Arrange)
- ❑ Promote patient self-management
- ❑ Link patient to other providers and supports



# Resources

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- Canada's Physical Activity Guide to Healthy Active Living
  - <http://www.paguide.com>
- Physical Activity Readiness Questionnaire - PAR-Q
  - <http://www.csep.ca/CMFiles/publications/parq/par-q.pdf>
- Physical Activity Readiness Medical Examination (PARmed-X)
  - <http://www.csep.ca/CMFiles/publications/parq/parmed-x.pdf>
- Manitoba In Motion
  - <http://www.manitobainmotion.ca/>
- Working it Out. Using Exercise in Psychotherapy by Kate F. Hays (1999)
- Move Your Body, Tone Your Mood: The Workout Therapy Workbook by Kate F. Hays (2002)
- Exercise for Mood and Anxiety Disorders by Michael W. Otto & Jasper A.J. Smits (2009). New York: Oxford University Press
- Stretching: The 30th Anniversary by Bob Anderson (2010)

**“If you don’t use it, you lose it.”**

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