How Can we Help Our Patients in Pain to Exercise?

Katherine Harman, PT, Ph.D.
School of Physiotherapy, Dalhousie University
Faculty/Presenter Disclosure

Relationships with commercial interests:
- There has been no commercial involvement in this project.
Pain Facts

Estimated costs in Canada per year

- direct health care >$6 billion
- indirect related to job loss and sick days $37 billion
- Global Burden of Disease LBP leading cause of years lost due to disability

One in five Canadians suffer from chronic pain

Chronic pain costs more than cancer, heart disease and HIV combined.

(Phillips and Schopflocher 2008; Schopflocher, Jovey et al. 2010; Moulin, Clark et al. 2002; Lim, Vos et al 2010; Stewart et. Al 2002 & 2003)
Low Back Pain

"by any standard ... a substantial burden on society.”

Self-limiting? It is difficult to discern new, independent episode, from recurrence and flare-up

Persistent mild, recovering, severe chronic and fluctuating

After 1 year, 41-66% not fully recovered, 73-80% still with pain

Rehabilitation needs to address this recurrence

(Dagenais, Caro et al. 2001; Burton, Balague et al 2006; Von Korff and Saunders 1996; Dunn et al 2006; Burton, McClune et al 2004; Loisel, Abenhaim et al 1997)
Poll Question...
I would like to get a sense of my audience...
What statement best describes you?

a. Health Care professional
b. Service provider
c. Researcher
d. Educator
e. Patient with pain
Poll Question

As part of my job, I prescribe treatment for patients in pain.

a. Yes
b. No
Poll question

I provide the following treatment/intervention(s) (click all that apply):

a. Electrophysical therapies (ultrasound, TENS)
b. Body works (massage, manual therapy)
c. Education
d. Psychological interventions
e. Exercise
Exercise & LBP

One of the few interventions that is effective and cost effective

No one form of exercise is better than others

Regardless of type... adherence to an exercise program is key to its success

Only a small percentage of individuals with LBP adhere to prescribed exercise programs

(Chou & Huffman, 2007; van Middelkoop et al, 2010; Hayden et al, 2005)
Exercise/Activity Adoption

Diagnostic dilemma of LBP affects exercise.

Exercise fear / poor knowledge and

Need for continued guidance and support

Concluded that these are modifiable and programs should consider: preferences, circumstances, fitness levels and exercise experience

(Stilwell, 2013; Slade, 2014)
Exercise Adherence - multifactorial

Physical activity levels, psychological factors, the presence of pain during exercise and the use of behavioural change/motivational strategies.

(Jack 2010; Beinart 2013)
So imagine that you have hurt your back…
There is no drug in current or prospective use that holds as much promise for sustained health as a lifetime program of physical exercise.

Dr. Walter Bortz II, Professor of Medicine
Stanford University
1983
BENEFITS OF EXERCISE
THERAPEUTIC EXERCISE

Exercise
Impairment based

Activity
Safe to move

Exercise
General / Sports

Movement exposure

Moving in the Mind – Sensory-Motor Imagery
## Non-specific LBP

<table>
<thead>
<tr>
<th>Exercise</th>
<th>focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yoga (Iyengar or viniyoga)</td>
<td></td>
</tr>
<tr>
<td>General exercise</td>
<td>strength, endurance, flexibility</td>
</tr>
<tr>
<td>Exercise program delivered in group or individual</td>
<td>endurance, spinal stabilization, manual therapy</td>
</tr>
<tr>
<td>Program or graded activity CBT</td>
<td>endurance, spinal stabilization</td>
</tr>
<tr>
<td>Specific</td>
<td>spinal stabilization</td>
</tr>
</tbody>
</table>
## RCTs Chronic Pain and Exercise

<table>
<thead>
<tr>
<th>Condition</th>
<th>Exercise</th>
</tr>
</thead>
<tbody>
<tr>
<td>NS Neck Pain</td>
<td>Strength, endurance, flexibility and neuromuscular training</td>
</tr>
<tr>
<td>MSK Pain</td>
<td>Flexibility training</td>
</tr>
<tr>
<td>Hip or knee pain</td>
<td>General exercise or flexibility in the pool</td>
</tr>
<tr>
<td>Shoulder</td>
<td>CBT/graded activity</td>
</tr>
<tr>
<td>Fibromyalgia</td>
<td>Endurance and flexibility in the pool</td>
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</tbody>
</table>
Engagement depends on

“What fits into your busy schedule better, exercising one hour a day or having pain 24 hours a day?”
Poll Question

I’d like to take a minute to get you to participate... I want you to type into the questions box one word that represents what you think is necessary to get a patient in pain engaged to participate in an exercise program.

Then Tonya will read your responses aloud for everyone to hear
Engagement depends on

Expectation

Importance

Confidence

“What fits into your busy schedule better, exercising one hour a day or having pain 24 hours a day?”
## Expectation Predicts Outcome

<table>
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<tr>
<th>Study</th>
<th>Population</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smeets et al (2008)</td>
<td>CLBP</td>
<td>Higher expectations associated with lower disability</td>
</tr>
<tr>
<td>Morlock et al (2002)</td>
<td>CLBP</td>
<td>Highest expectations had highest level of improvement</td>
</tr>
<tr>
<td>Kalauokalani et al (2003)</td>
<td>CLBP</td>
<td>Highest expectations had highest level of improvement</td>
</tr>
</tbody>
</table>
Importance

Linked to perceived need.

Important when the behaviour will lead to an outcome that is valued by the patient.

The clinician can use the knowledge that they have with the patient rapport to discover the health benefit that is valued by the patient.

(Jensen et al 2003)
Solutions that build self-efficacy.

High exercise self-efficacy is a facilitator to exercise adoption in patients with NSCLBP

One of the most consistent predictors of physical activity in adults

Participation in exercise tends to increase exercise self-efficacy which reinforces exercise behaviour and continued exercise participation

(Weinberg & Gould, 2003; Bauman et al 2012).
Behaviour Change Techniques

Psychological interventions such as ...

Mental rehearsal of successful performance, Self talk, or identifying health consequences of behaviour.

New Taxonomy identified 93 different BCTs (Michie et al 2013)

29 PT-BCT, including: relaxation training, modeling, graded exposure and goal setting (Harman et al 2014).

A 70% overlap was found between two lists.
Build self-efficacy

Importance

Expectations