Techniques to Enhance Adherence to Physical Activity and Exercise: Recommendations From Theory to Practice

*Dr Maura Iversen*

Professor and Chair, Department of Physical Therapy, Movement & Rehabilitation Sciences, Northeastern University
Senior Lecturer, Harvard Medical School
Clinical Epidemiologist and Behavioral Scientist, Division of Rheumatology, Immunology & Allergy, Brigham & Women’s Hospital, Boston, MA USA
Adjunct Foreign Professor, Karolinska Institute, Stockholm, Sweden

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Objectives

- Describe challenges patients face when asked to change their behaviors
- Review behavioral interventions to promote adherence to exercise/physical activity
- Address common assumptions and misperceptions about behavior change
- Synthesize the evidence for behavioral strategies to promote adherence
- Apply these strategies to clinical practice
ACR Guidelines KOA- 2012

Exercise Guidelines For KOA

EULAR for KOA
Regular exercise
optimal exercise regimen
not yet determined

NHS for KOA
Activity and exercise
recommended-
irrespective of age,
comorbidity, pain, or
disability. Local
strengthening, general
aerobic fitness.
Manipulation and
stretching as adjunct Rx

SRS for OA
6-8 wks exercise. Exercise
goal determines type of
exercise. Do daily activities
Exercise with <50° knee
flexion. Individual exercise
as effective as group
exercise. Supervised
exercise greater pain relief
and compliance than home
exercises

WHO General
30 min, regular, moderate-intensity physical activity,
5 days/wk

OARSI KOA
Referral to physical therapist for
evaluation and instruction in
appropriate exercises. Patients
encouraged to undertake &
maintain regular exercise- aerobic,
strengthening and range of motion.

ACR for KOA
Aerobic, Range-of-motion and
muscle strengthening
exercises
Physical and occupational
therapy

WHO General
30 min, regular, moderate-intensity physical activity,
5 days/wk

(Iversen, TAMD, 2010)
Behavioral Interventions

- Strategies used to encourage individuals to adopt healthier behaviors
  - Interventions based on psychological theories
  - Individually tailored, patient-directed behavior change is the goal
# Behavior Change Models and Interventions

<table>
<thead>
<tr>
<th>Behavioral Interventions</th>
<th>Description</th>
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<tbody>
<tr>
<td>Cognitive Behavioral Therapy (CBT)</td>
<td>Based on Cognitive Model of Emotional Response - concept that our thoughts cause our feelings and behaviors, not external things</td>
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<tr>
<td>Motivational Interviewing</td>
<td>Counseling to facilitate and engage intrinsic motivation within client to change behavior</td>
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<tr>
<td>Behavior Reinforcement</td>
<td>Stimulus-Response, Reinforcement of desirable behaviors (ie Weight Watchers)</td>
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<tr>
<td>Health Belief Model</td>
<td>Patient beliefs drive change</td>
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<tr>
<td>Mindfulness</td>
<td>Meditation-based; focus attention/ awareness</td>
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<tr>
<td>Transtheoretical Model</td>
<td>Conceptualizes intentional behavior change – series of stages with strategies</td>
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<tr>
<td>Theory of Planned Behavior</td>
<td>Links beliefs, attitudes and behavioral intention</td>
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<tr>
<td>Social Cognitive Theory</td>
<td>Knowledge acquisition directly related to observing others within social contexts</td>
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How can Clinicians Support Behavior Change?

❖ Develop an attitude
  ◆ Role is negotiator and facilitator

❖ Help patients explore information
  ◆ Risks of the behavior (or not doing the behavior)
  ◆ Positive consequences of new behavior

❖ Provide Choices
  ◆ Whether to change
  ◆ How to change
Barriers to Adherence

- Studies reveal 50-80% of patients are non-adherent with their Rx
- Barriers to adherence
  - Provider is not supportive of Rx - exercise
  - Environmental - money, access etc
  - Lack of social support
  - Psychosocial well being
  - Readiness to change
  - Health beliefs
  - Disease characteristics - chronicity
Stimulus-Response Theory

- A = Antecedent (stimulus)
- B = Behavior (response)
- C = Consequences
  - Reinforcement - increases the behavior
  - Lack of reinforcement decreases the behavior
  - Negative consequences decrease the behavior
Transtheoretical Model

Precontemplation

Relapse

Maintenance

Action

Contemplation

Determination

Termination

Prochaska. Am J of Health Prom, 1997

Synonyms

Determination = Preparation
Termination = Exit
Key Questions to Consider

- What is your role with patients who are in each stage of change?

- How do you move patients forward from one stage to the next?

- What concrete actions can you take to help patients at the various stages of change?
Behavior Change Rule and Transtheoretical Model

Graph showing percentages in three stages:
- Precontemplative: 40%
- Contemplative: 40%
- Preparation: 20%
Influence of Education on Behavior Change

High school educated

- Precontemplative: 60
- Contemplative: 30
- Preparation: 10

College educated

- Precontemplative: 40
- Contemplative: 40
- Preparation: 20
Five A’s of Adherence Conversations

❖ Address
❖ Assess
❖ Advise
❖ Assist
❖ Arrange follow-up
❖ **Goal:** Work with client to establish goal client is most likely to adhere to
Case

Ted is a 45 year old divorced construction worker with advanced KOA. This is not his first time he has been referred to PT but you learn he has never followed through on exercises in the past.

- In addition, he is 40 lbs overweight and is a 1 pk cigarettes/day smoker. At the end of the day he likes to relax in front of the TV and drink a few beers.
What To Do First?

❖ If you were Ted what would you like to address first?
  ♦ How would you approach the conversation?
  ♦ What factors would you consider?
Advise and Assist

❖ Advise
- Provide information
- Provide resources
- Modify beliefs
- Provide cues to action
- Provide social supports
- What is at stake?
  • Consequences of doing nothing

❖ Assist
- Negotiate a plan
  • what are you willing to change?
  • what are you able to change now?
  • what else are you willing to change?
- Educate patient about performing the program
- Overcome barriers
Address and Assess

❖ Address
- Get the patient’s attention
- Give your full attention
- Identify the problem
- Address primary and secondary prevention issues

❖ Assess
- History of change
- Knowledge of risks
- Readiness to change
- Motivation to change
  - what is the worst thing that could happen?
  - what is the best thing that could happen?
  - What will you need to give up?
- Resources and barriers
Motivational Interviewing (MI)

“A directive patient-centered counseling style for enhancing intrinsic motivation to change by exploring and resolving ambivalence that builds on Transtheoretical Model”

Rollnick and Miller, 1995
Motivational Interviewing

- **Principles**
  - Advice
  - Barriers
  - Choices
  - Decrease resistance
- **Empathy**
- **Feedback**
- **Goals**
- **Helping**

- **Strategies**
  - Open-ended questions
    - Identify current situation
  - Reflective listening
  - Affirming
  - Summarizing
  - Eliciting self-motivational statements
Motivational Interviewing

❖ Your Role

◆ Collaborate with the patient
  • Ask permission to discuss problem
  • Give advice only when patient is ready to receive it
  • Develop empathy
    – Reflective listening- “I hear what you are saying”, ”so in summary”
  • Begin with open ended questions

◆ Appreciate ambivalence
  • Hear and amplify client’s ambivalence about current behavior and future goals
Open Ended Questions

❖ No lecturing!
  ✦ What concerns do you have about your KOA?
  ✦ If you were to start exercising, what would that be like?
  ✦ What worries you the most about your KOA?
  ✦ What is the worst thing that could happen if you don’t exercise?

❖ Summary statements (active listening)
Self-Efficacy and Motivational Interviewing

❖ What is self-efficacy?
   - Confidence in one’s ability to take action

❖ On a scale of 0-10 (10 being the highest), how confident are you that you can adhere to an exercise program?
   - Why have you given yourself a (chosen number) and not a 1?
   - What would need to happen for you to move (chosen number) to (higher number)?
   - How can I help you get from (chosen number) to (higher number)?
Your Role to Support Self-efficacy

- Your belief in the patient’s ability to change is powerful
- Patient must select and carry out changes
- Reinforce change talk
Motivational Interviewing

- Roll with resistance
  - Avoid arguing
  - Recognize the patient is primary source of answers and solutions
For patients who like to conceptualize outcomes, these process can be effective.

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<th>Benefits</th>
<th>Do not make any changes</th>
<th>Make healthy changes in behavior</th>
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<tr>
<td>Costs</td>
<td></td>
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Decisional Matrix
Social Cognitive Theory (SCT)

Bandura, 1986

Personal Factors

Self tracking progress, setting goals, reaching out for social supports, self-teaching and self-feedback and rewards

Behavior

Must know what the behavior is, have the skills to perform it, observe behavior and practice

Environmental Influences

Social norms, access, resources, influence on others and environment, modeling key
SCT Key Concepts

- Observational learning
- Reinforcement
- Self-control
  - Strategies and tactics for self-regulation, Regulation of goal-directed behavior or performance, Stress management
- Self-efficacy
  - Goal setting, problem solving, intrinsic rewards
Do and Don’ts To Promote Behavior Change in Exercise

❖ **Dos**

❖ Target one behavior to change or activities related to one behavior
❖ Incorporate strategies for self-monitoring
❖ Assess your patient's self-efficacy, one simple question to determine where they lie on the spectrum of confidence
❖ Ask the patient what worked best for them in the past when they were physically active - use this information to help them work with you to design a program that is successful

❖ **DON'Ts**

❖ Assume all patients with OA are equally affected by the same strategies (no one size fits all)
❖ Try to change too many behaviors at one time
❖ Forget to reinforce patients’ positive comments about their past successes with exercise - most often patients with KOA feel better once they move - help them remember that they were successful with exercise
❖ Forget to assess where they are along the behavior change spectrum – helps target messaging
Sample Contract

I, ________________, agree to take the medication as prescribed.

(Participant signature)

________________________
(Physical therapist signature)

________________________
(Date)

____________
Mobile Texting and Alignment with Health Behavior Change

- Texting compatible with
  - Theory of Planned Behavior (Ajzen & Fishbein) and Health Belief Model (Becker)
  - Provides cues to action, social support and reinforcement of behaviors

[Diagram of Theory of Planned Behavior and Health Belief Model]
Community Resources for Individuals with OA

- Your Exercise Solution Yes Tool
- Fit & Strong
- Walk with Ease
- Fitness & Exercise for People with Arthritis (FEPA)
- AF Aquatic Program

Check CDC.gov for full list of resources or Arthritis.ca
Conclusions

- Positive self-efficacy is important for change
- Provide opportunities to practice new behavior
- Behavioral and environmental supports
- Rewards/reinforcement
- Messaging important
- Begin and end every session with success

Patients must value the outcome and know you support the behavior
Thank you

m.iversen@neu.edu
References

References