Integrated Treatment of Substance Use Disorders and Mental Health and Cognitive Challenges

Presented by:
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Vinland National Center
Overview of Disabilities

- Attention Deficit Disorders
- Developmental Disability
- Brain Attack
- Traumatic Brain Injury
- Physical Disabilities
- Illness/Infection
- Anoxia
- Learning Disabilities
- SPMI
Other Diagnosis that Impact Executive Functioning

• Serious and Persistent Mental Illness diagnosis
  – Mood disorders – Depression, Anxiety, PTSD
  – Thought disorders - Schizophrenia

• Learning Disabilities
  – Fetal Alcohol Syndrome Disorder
  – Developmental Disabilities
Effects / Changes of a TBI

- Orientation
- Concentration
- Mental control
- Shifting thoughts
- Sequencing
- Perseveration
- Memory verbal and non-verbal
- Reasoning verbal and non-verbal
- Learning over time
- Linear thought process
- Mechanical manipulation

- Perception
- Planning
- Foresight
- Language
- Anger / Aggression
- Social inappropriateness
- Difficulty managing money
- Following directions
- Formulation goals
- Starting and completing tasks
- Speaking clearly
Mental Health Symptoms

- Poor motivation
- anxious
- Poor concentration
- Unresponsive
- Indifferent
- Self-absorbed
- Becoming socially isolated
- Lack of interest in activities
- Lack of energy
- Problems with sleep
- Highly emotional Irrational
- Dramatic change of personality
- Extreme mood swings
- self-worthlessness
- Suicidal Ideation
- Psychosis
- Hyperactivity
- Poor impulse control

Full lives for people with disabilities
When Working with Patients with TBI

Group Issues that may need to be addressed

• Significant Grief/Loss:
  – Loss of memory/skills/abilities
  – Loss of identity
  – Loss of power/control
  – Loss of anticipated future (dreams/career)
  – Relationship issues (possible loss of relationships)
  – Spiritual confusion/crisis
  – Isolation related to all of the above
Compensatory Skills

- Organizational skills
- Teach common routines
- Teach main idea and then details
- Groups tasks – doctor, work, support meetings
- Task organization
- Use checklist and daily planner
- Work in quiet environment
- Eliminate distractions
- Keep items in designated places
Resiliency

• The study of why things go right, even though the odds say they should have gone wrong
• Initial studies were of individual resiliency
• More recently research has also focused on family and community resiliency
Resiliency

Is the ability to not only survive, but thrive!

In order to remain strong, we must stretch ourselves and spring forward!
Teaching Resilience

Resilience involves complex processes of interrelated risk and protective factors at the individual, family and community levels;

Resilience is not static and may fluctuate;

Practitioners should be clear on how they are defining risk, protective factors and adaptive functioning; and the individual situation and needs of each person;

The greater the number or chronicity of risks the person is exposed to, the less likely the person is to display resilient functioning (Vanderbilt-Adriance & Shaw, 2008).
Demands vs Resources

When demands on the individual are greater than resources to meet these demands. The individual experiences:

- Disruption
- Dysfunction
- Feeling Overwhelmed
- Increase in mental symptoms
- Decreased use of compensatory skills
- Use of avoidant coping
- Return to chemical use

The focus of resiliency treatment is to lower demands and increase individual resources.
Protective Factors & Resources

- Protective factors are most often used to refer to qualities that predict future outcomes through their ability to moderate, mediate, or compensate for risk
Personal Resilience

- Biological factors (temperament, emotions, intelligence, creativity, resistance to disease, genetic and physical characteristics)
- Attachment (capacity for bonding, for forming significant relationships with others; the capacity for empathy, compassion, caring and joy)
- Control (capacity to manipulate one’s environment, mastery, social competence; self-esteem; personal autonomy and sense of purpose)
People who are resilient

- Sociability
- Optimism
- Flexibility
- Self-confidence
- Cognitive reappraisal
- Active coping
- Social support
- Humor
- Physical exercise
- Prosocial behavior

- Competence
- Insightfulness
- Perseverance
- Perspective
- Self control
Skills training

Communication
Problem solving
Goal Accomplishment
Time Management
Personal Strengths and Values
Stress management
Exercise
Mindfulness
Personal Qualities
Optimism
Developing Forgiveness
Gratitude

Generosity
Living With Purpose
Problem Solving
Practice yoga
Organization Skills
Mindfulness

Full lives for people with disabilities
A spiritual or religious orientation is associated with better mental health. It can help increase self-esteem, find meaning in life, improve family and special relationships, decrease drug and alcohol abuse and lead to less sexual promiscuity. Spirituality provides a moral compass to help navigate life.
Developing Support

- Developing and Maintaining Relationships
- Using Support from Others
- Developing a professional support network
- Access to support services
- Community networking
- Attachment to the community
- Participation in community groups
- Community/cultural norms against violence
- Strong cultural identity/ethnic pride
What is Mindfulness?

To practice mindfulness means to:

• Adopt a nonjudgmental stance to our experience
• Practice patience
• Loosen our grip on what we “know” about our experience
• Trust our thoughts feelings and experience
• Recognize the urge to get and hold pleasant experience and push away unpleasant experience
• Experience the qualities of acceptance
• Let go
Rationale for Mindfulness

- Reinforces Experiential Learning.
- Client’s with brain injuries often cannot remember specific details of a session, but can remember how they felt about it.
- Group fits in well with other services including exercise program, recreational therapy outings, outdoors activities, art projects, and music therapy.
- Offers concrete intervention to minimize impact of mental health symptoms including, low frustration tolerance, anxiety, depression, and impulsivity.
- Consistent with Vinland Center’s goal of treating mind, body, and spirit.
The Key Skills

• Practicing Basic Self Care
• Calming Self Through Breathing and Mindfulness
• Creating an Optimal Environment
• Experiencing Emotions
• Building Positive Experiences
• Cultivating Hope and Gratitude
The Key Skills

• Reframing
• Practicing Acceptance
• Understanding Impermanence
• Practicing Attached Detachment
• Focusing on Effectiveness
• Demonstrating Understanding
• Developing Meaningful Activity

“Effective Addiction Treatment: The Minnesota Alternative” by Paula DeSanto MS, LSW, CPRP, CCDP-D
Research

Research study was designed by Gisli Kort Kristofersson with collaboration from the Center for Spirituality and Healing at the University of Minnesota and Vinland Center

- The purpose of this pilot study was to examine the effectiveness and impact of an adapted MBSR program on different psychosocial dimensions of persons suffering from a dual diagnosis of Substance Use Disorders and Traumatic Brain Injury (Kort Kristofersson, 2012)
  
  Specific focus was placed on:
  
  Role of adapted Mindfulness on reducing impulsivity
  Improving quality of life issues
  Reducing anxiety and depression symptoms
Beginning Steps

An adapted mindfulness practice curriculum for both the residential chemical health program and the outpatient program was developed

Participants in both the Men’s program and Women’s program meet as a group one time weekly for 45 minute sessions

Individual practice opportunities are also available with guided meditations provided on CD with players and headphones

One of four modules is presented in group a week with specific goals, information, practice and homework opportunities.

- Information includes concepts of mindfulness and descriptions of practice
- Practice includes guided body scan meditation, guided sitting meditation, standing yoga, and lying yoga

Full lives for people with disabilities
How is it Helpful?

• Increased activation of areas of the brain associated with
  • Executive Decision-Making
  • Self directed Attention
  • Emotional processing and regulation
• Higher rates of self efficacy
• Higher rates of perceived quality of life
• Greater recognition of positive experiences
• Reduced reactivity

Source: JFK Johnson Rehabilitation Institute
What We Know So Far

A mindfulness practice can be adapted to clients suffering from substance use disorders and brain injuries.

A regular practice of mindfulness offers direct, here and now, feedback on clients' own innate ability to calm the body and mind.

According to study, subjective reporting indicates that practice periods have some positive effects on mood, impulsivity, anxiety and personal relationships of Vinland Center participants (Kristoferson, 2012).

Using brief 3-5 minute practice sessions before beginning a chemical health group is an experiential way to reinforce the expectation of tolerance and acceptance of self and others.
Bibliography

• Gisli Kort Kristofersson, (2012). The Effects of a Mindfulness Based Intervention on Impulsivity, Symptoms of Depression, Anxiety, Experiences and Quality of Life of Persons Suffering from Substance Use Disorders and Traumatic Brain Injury, A Dissertation Submitted To The Faculty of The University of Minneasota. Received via email, October 22, 2012.
Creating Cultures of Trauma-Informed Care

Core Principles of a Trauma-Informed System of Care

• **Safety**: Ensuring physical and emotional safety
• **Trustworthiness**: Maximizing trustworthiness, making tasks clear, and maintaining appropriate boundaries
• **Choice**: Prioritizing consumer choice and control
• **Collaboration**: Maximizing collaboration and sharing of power with consumers
• **Empowerment**: Prioritizing consumer empowerment and skill-building

Source: Roger Fallot, PhD, Community Connections
Universal Precautions

• Assume all clients have some kind of trauma history

• Formalize trauma assessment

• Inform staff of confirmed trauma history and develop specific treatment plan interventions related to such

• Dignity and respect should be emphasized (resident rights and Respect Policy)
The Link Between PTSD and Substance Abuse

- PTSD Rates: 10% for women, 5% for men (lifetime, US). Up to 1/3 of people exposed to trauma develop PTSD. Men have higher rates of trauma, but women have more childhood trauma, and are more likely than men to develop PTSD if exposed to trauma.

- PTSD and CD Rates: Of clients in substance abuse treatment, 12%-34% have current PTSD. For women, rates are 33%-59%.
Definition of Trauma

The person’s response to the event must involve intense fear, helplessness, or horror (or in children, the response must involve disorganized or agitated behavior).”


Trauma occurs when an external threat overwhelms a person’s internal and external positive coping resources.

(Bloom and Fallot, 2009)
Effects of Trauma

- Estrangement; a sense of isolation or disconnection from others or the environment
- Feelings of powerlessness or helplessness
- Changes in one’s understanding or view of oneself or of the self in relation to others; a change in world view
- Devastating fear; loss of safety or trust that may relate to interpersonal interactions, treatment practices or specific environments
- Feelings of shame, blame, guilt & stigma

Source: Adapted from Blake, M. (2010).6
Grounding Tools

To use sensory techniques, follow these important steps:
• Focus on the present (not the trauma)
• Take 3 slow, deep breaths
• Try doing an activity that changes your current experience in any of your 5 senses:
  1. Sight – What do you see in the room? Name 5 things.
  2. Taste – Suck on candy, drink something cold or hot, eat something sweet or sour, suck on ice, gum
  3. Touch – Varying textures, such as beads, chain, blanket, corduroy clothes, pets (can actually calm and lower anxiety), a safe person w/ permission
  4. Smell – Flowers, aromatherapy, sharp smells (certain foods), laundry detergent, candles, lotions, bubble bath (added bonus of touch)
  5. Hear – Safe person’s voice, music, loud noise, car horn, whistle, dog bark
Examples of comforting techniques:

- Listen to music
- Curl under a blanket
- Cuddle with a pet
- Take a bath
- Light candles or incense
- Use art, collaging, journaling, or other creative outlets
- Call a support person and talk about what is happening
- Engage in safe comfort rituals from Childhood
- Drink hot tea or hot chocolate
- Rock in a rocking chair
- Cry
- Hug a stuffed animal
- Go to safe place (actually or in mind)
Examples of distracting techniques:

- Watch TV (NOT Law & Order SVU!)
- Watch a funny movie
- Read a book
- Exercise
- Take a walk (only if grounded enough)
- Clean
- Make a list of things to do
- Call a support person and talk about other things
- Use Sensory Techniques, esp. touch and taste
- Play cards, checkers, computer games
- Engage in normal routine
- Window shop
Trauma Resources
Evidence Based Programs and Trauma Specific Treatment Models

- **Cognitive Behavioral Therapy**
  
  [www.nacbt.org](http://www.nacbt.org)

  Short-term psychotherapy based on an educational model

- **Trauma Adaptive Recovery Group Education and Therapy (TARGET), Julian Ford, Ph.D.**
  
  [www.nctsnet.org/nccts/asset.do?id=726](http://www.nctsnet.org/nccts/asset.do?id=726)

  A strength based model participants learn self regulatory states participants learn skills to control PTSD symptoms

- **Seeking Safety, Lisa Najavits, Ph.D**
  
  [www.seekingsafety.org](http://www.seekingsafety.org)

  Focus on learning coping skills used with people who have substance abuse issues addresses skill areas around boundaries, grounding and self care

- **Trauma Recovery and Empowerment Model (TREM) Community Connections, Washington DC**
  
  [www.communityconnectionsdc.org/trauma/trem.htm](http://www.communityconnectionsdc.org/trauma/trem.htm)

  Focuses on skill building around trauma, responses and support uses culturally related exercises uses gender specific approaches

- **Risking Connections, Sidran Foundation, Karen Saakvitne, Ph.D**
  
  [www.sidran.org](http://www.sidran.org)

  Developed between Maine and New York focuses on building hope and connection

- **Sanctuary Model, Sandra Bloom, M.D.**
  
  [www.sanctuaryweb.com](http://www.sanctuaryweb.com)

  Inpatient, democrat, non violent community appropriate for children or adults skill building around safety and affect
What Is Illness Management and Recovery (IMR)?

IMR includes education about mental illness but emphasizes putting information into action through the development of personal goals. IMR strongly emphasizes helping people set and pursue personal goals and helping them put strategies into action in their everyday lives.
IMR Practice Principles

• Consumers define recovery.
• Education about mental illnesses, chemical dependency and Brain injury is the foundation of informed decision-making.
• The Stress-Vulnerability Model provides a blueprint for illness management.
IMR Practice Principles

• Collaborating with professionals and significant others helps consumers achieve their recovery goals.
• Relapse prevention planning reduces relapses and re-hospitalizations.
• Consumers can learn new strategies for managing their symptoms, coping with stress, and improving their quality of life.
How is Vinland providing IMR through our MICD programming?

- Critical components of IMR are summarized in educational handouts that practitioners distribute and review with consumers during the sessions.
- Six key IMR goal areas are emphasized during weekly two-hour MICD groups.
Topic Areas in IMR Handouts

• Recovery strategies

• Stress-vulnerability model

• Using medication effectively

• Relapse prevention (Role-plays)

• Coping with stress

• Coping with problems and persistent symptoms
How Is IMR provided? (continued)

• Practitioners provide a variety of interventions including:
  – Psycho-education; MICD groups, primary, 1:1, and family programming
  – Behavioral tailoring (for consumers who choose to take medication); Staff consulting Psychiatrist
  – Relapse prevention; MICD, primary, and 1:1.
  – Coping skills training; MICD, primary, and 1:1
Psychoeducation

- Psychoeducation uses evidence-based teaching methods to provide basic information about mental illnesses and treatment.
Behavioral Tailoring

• Consumers who choose to take medications learn strategies to help manage daily medication regimes.
Relapse Prevention

• Relapse prevention involves helping consumers identify triggers of past relapses, early warning signs of impending relapse, and skills to manage high risk situations.

• Consumers learn how to develop plans and skills for preventing relapses.
Coping Skills Training

- Coping skills training helps consumers identify and enhance effective strategies that they currently use to deal with symptoms.
- Consumers also learn and practice using new skills, strategies and acceptance principles.
Pre and Post-Participation outcomes: Question #1. “I set my own goals for recovery”.

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Question #2. “I have a plan to deal with potential challenges”.

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### Question #3. I feel positive about myself”

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Question #6. “I communicate closely with my doctor about my medications

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Question #7. “I recognize my personal relapse warning signs”

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Question #8. “I seek help if I believe that I am in danger of relapse.”

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Question #9 “I believe I am prepared to cope with stress”.

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Question #10. “I take the necessary steps to prevent stress in my own life.”

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Question # 11. “I know which strategies will help me cope with stress”

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Question #12. I use these strategies to help me cope with stress”.

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Additional Resources

• For more information about Illness Management and Recovery and other evidence-based practices, visit: http://www.samhsa.gov/SHIN
Topics about 8 Parameters of Health

- Strength
- Flexibility
- Endurance
- Balance
- Coordination
- Posture
- Nutrition
- Body Mechanics
Strength

• 3 times each week with a rest day between sessions is recommended

• Health clubs vs. home programs:

**Health clubs:**
Pros: Newest, highest quality equipment, latest trends and classes
Cons: Expensive, waiting for equipment, not convenient

**Home programs:**
Pros: Inexpensive usually, very effective if initial consult is guided and structured
Cons: Home distractions

Full lives for people with disabilities
Flexibility

Benefits:

• Decrease chance of injury/re-injury
• Improve joint function
• Decrease neck and back pain
• Reduced muscle tension
• Improved circulation and overall energy

VINLAND NATIONAL CENTER
Full lives for people with disabilities
Endurance/Aerobic

Benefits:
- Increases the overall strength of your heart and lungs making them more efficient
- Increase metabolic rate
- Reduce risk of obesity, heart disease, hypertension, type II diabetes, strokes and some cancer
- Increase HDL (Good Cholesterol) and reduce LDL (Bad Cholesterol)
- Start out at a slow pace then gradually build up over time, remember the talk test.
- Plan a time of day that works best in your schedule

Frequency: A minimum of 3 times each week to daily.

Intensity: 65-85 percent of your max heart rate which is 220-age.

Duration: 20 minutes minimum building up to 40 minutes or longer. Remember, cardiovascular exercise should be fun not exhausting.
Balance and Coordination

• Balance and coordination exercises are a big part of any fitness and wellness program
• Activities include using wobble boards, bosu® trainers, balance beams and physioballs
• Exercises can be performed most days of the week

Benefits:
• Increased safety when performing ADL
• Prevent injury from falls
• Improved athletic ability
• Improved core strength which improves
• Improved joint stability
• Stimulates brain activity
Posture

- Posture helps determine the amount and distribution of stress we place on bones, muscles, tendons, ligaments and discs
- Core strength is important along with middle back and posterior shoulder exercises
- Pay attention to sit, stand, lift, carry, twist, turn and bend
- Research shows that people who exercise regularly are less likely to suffer from back injuries and pain
- The three key components are strengthening, stretching and cardiovascular activities

**Postural mistakes include:**
1. Slouching
2. Rounding the shoulders
3. Hiking the shoulders
4. Forward head position
5. Chin tilted upward
6. Forward trunk lean
7. Locking the knee

**Benefits:**
- Improved appearance
- Decreases chance of osteoporosis
- Decreases risk of arthritis
- Decreases risk of cervical and lumbar pain
Full lives for people with disabilities

Therapeutic Exercise Data Pre and Post

• Pre and post therapeutic exercise program, Males, N=482
  • Body Fat percentage: Decrease of 7% pre and post
  • Pain Levels: Decrease 29% pre and post
  • Balance: Increased 16% pre and post program
  • Brain speed: Increased 14% pre and post program
  • Blood Pressure Systolic: decreased 9.2%
  • Blood Pressure Diastolic: decreased 10%
# Therapeutic Exercise Assessments

<table>
<thead>
<tr>
<th>N=80 Males</th>
<th>Pre Assessment</th>
<th>Post assessment</th>
<th>% change</th>
<th>Norms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compliance Rating 78%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cervical Rotation (degrees)</td>
<td>30</td>
<td>42</td>
<td>up 39%</td>
<td>80°</td>
</tr>
<tr>
<td>Cervical Lateral Flexion (degrees)</td>
<td>19</td>
<td>25</td>
<td>up 36%</td>
<td>45°</td>
</tr>
<tr>
<td>Cervical Flexion (degrees)</td>
<td>35</td>
<td>36</td>
<td>up 3%</td>
<td>50°</td>
</tr>
<tr>
<td>Cervical Extension (degrees)</td>
<td>31</td>
<td>43</td>
<td>up 39%</td>
<td>70°</td>
</tr>
<tr>
<td>Shoulder Flexion (degrees)</td>
<td>81</td>
<td>125</td>
<td>up 54%</td>
<td>180°</td>
</tr>
<tr>
<td>Shoulder Extension (degrees)</td>
<td>31</td>
<td>47</td>
<td>up 52%</td>
<td>60°</td>
</tr>
<tr>
<td>Shoulder Abduction (degrees)</td>
<td>83</td>
<td>110</td>
<td>up 32%</td>
<td>180°</td>
</tr>
<tr>
<td>Hamstring Extension (degrees)</td>
<td>57</td>
<td>74</td>
<td>up 30%</td>
<td>90°</td>
</tr>
<tr>
<td>Lumbar Extension (degrees)</td>
<td>53</td>
<td>61</td>
<td>up 16%</td>
<td>45°</td>
</tr>
<tr>
<td>Lumbar Flexion (degrees)</td>
<td>58</td>
<td>67</td>
<td>up 15%</td>
<td>90°</td>
</tr>
<tr>
<td>Peak Hand Grip (pounds)</td>
<td>99</td>
<td>107</td>
<td>up 8%</td>
<td>105 lbs</td>
</tr>
<tr>
<td>Body Fat (percentage)</td>
<td>22</td>
<td>20</td>
<td>down 12%</td>
<td>&lt;20%</td>
</tr>
<tr>
<td>Leg Press (pounds)</td>
<td>138</td>
<td>152</td>
<td>up 10%</td>
<td>140 lbs.</td>
</tr>
<tr>
<td>Pain Levels (subjective 0 to 10 scale)</td>
<td>3</td>
<td>2</td>
<td>down 33%</td>
<td>goal is zero</td>
</tr>
<tr>
<td>Phy Capacity (subjective 10% to 100%)</td>
<td>55</td>
<td>72</td>
<td>up 31%</td>
<td>goal is 100%</td>
</tr>
<tr>
<td>Heart Rate (Beats per minute)</td>
<td>103</td>
<td>103</td>
<td>0</td>
<td>100 BPM</td>
</tr>
<tr>
<td>Balance (seconds)</td>
<td>7</td>
<td>9</td>
<td>up 22%</td>
<td>10 seconds</td>
</tr>
</tbody>
</table>
## Therapeutic Exercise Assessments

<table>
<thead>
<tr>
<th>N=29 Females</th>
<th>Pre Assessment</th>
<th>Post assessment</th>
<th>% change</th>
<th>Norms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Compliance Rating 84%</strong></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td><strong>Cervical Rotation (degrees)</strong></td>
<td>55</td>
<td>77</td>
<td>up 39%</td>
<td>80°</td>
</tr>
<tr>
<td><strong>Cervical Lateral Flexion (degrees)</strong></td>
<td>27</td>
<td>41</td>
<td>up 49%</td>
<td>45°</td>
</tr>
<tr>
<td><strong>Cervical Flexion (degrees)</strong></td>
<td>36</td>
<td>48</td>
<td>up 33%</td>
<td>50°</td>
</tr>
<tr>
<td><strong>Cervical Extension (degrees)</strong></td>
<td>57</td>
<td>71</td>
<td>up 24%</td>
<td>70°</td>
</tr>
<tr>
<td><strong>Shoulder Flexion (degrees)</strong></td>
<td>118</td>
<td>163</td>
<td>up 38%</td>
<td>180°</td>
</tr>
<tr>
<td><strong>Shoulder Extension (degrees)</strong></td>
<td>41</td>
<td>68</td>
<td>up 66%</td>
<td>60°</td>
</tr>
<tr>
<td><strong>Shoulder Abduction (degrees)</strong></td>
<td>92</td>
<td>158</td>
<td>up 72%</td>
<td>180°</td>
</tr>
<tr>
<td><strong>Hamstring Extension (degrees)</strong></td>
<td>72</td>
<td>90</td>
<td>up 25%</td>
<td>90°</td>
</tr>
<tr>
<td><strong>Lumbar Extension (degrees)</strong></td>
<td>51</td>
<td>60</td>
<td>up 18%</td>
<td>45°</td>
</tr>
<tr>
<td><strong>Lumbar Flexion (degrees)</strong></td>
<td>65</td>
<td>73</td>
<td>up 12%</td>
<td>90°</td>
</tr>
<tr>
<td><strong>Peak Hand Grip (pounds)</strong></td>
<td>54</td>
<td>66</td>
<td>up 21 lbs.</td>
<td>55 lbs</td>
</tr>
<tr>
<td><strong>Body Fat (percentage)</strong></td>
<td>32</td>
<td>30</td>
<td>down 5%</td>
<td>&lt;25%</td>
</tr>
<tr>
<td><strong>Leg Press (Pounds)</strong></td>
<td>90</td>
<td>116</td>
<td>up 29 lbs.</td>
<td>120 lbs.</td>
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<tr>
<td><strong>Pain Levels (subjective 0-10 scale)</strong></td>
<td>4</td>
<td>2</td>
<td>down 50%</td>
<td>0 is goal</td>
</tr>
<tr>
<td><strong>Phy Capacity (subjective 10 - 100%)</strong></td>
<td>49</td>
<td>67</td>
<td>up 38%</td>
<td>100% is goal</td>
</tr>
<tr>
<td><strong>Heart Rate (beats per minute)</strong></td>
<td>105</td>
<td>109</td>
<td>up 4%</td>
<td>100 BPM</td>
</tr>
<tr>
<td><strong>Balance (seconds)</strong></td>
<td>5</td>
<td>7</td>
<td>up 50%</td>
<td>10 seconds</td>
</tr>
</tbody>
</table>
Nutrition

• The key is to eat healthy most days of the week, eating from all the food groups.
• Try to eat smaller portions several times each day vs. few large meals.
• If you crave a sweet, have one, but make it a small one.
• Try to include several sources of anti oxidants daily.

**Healthy eating consists of:**
- Complex carbohydrates
- Lean sources of protein
- Monounsaturated or polyunsaturated fats

**Recommended Daily Amounts:**
- 50-60% of caloric intake comes from carbohydrates
- 20-30% from protein
- 20-30% from fat

- **Carbohydrates:** 4 calories per gram
- **Protein:** 4 calories per gram
- **Fat:** 9 calories per gram
Therapeutic Recreation