Flagstaff Medical Center
Wellness Program

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DDC STATE CONFERENCE MAY 14, 2013
Introduction

- COLLEAGUES
- AGENDA OVERVIEW
- ACTIVITY
Wellness Video

“A GRADUATE SPEAKS”
Philosophy of the Wellness Concept

PANEL DISCUSSION
Philosophy of the Wellness Concept

- High failure rate for chemical dependency/substance abuse treatment programs
- Dilemma: If client can’t use AOD while in the DDC program, risk of relapse is high if client can’t replace the “feel-good” mood altering and calming neurochemicals in some other way
- What legal “feel-good” mood altering and calming neurochemicals exist?
  - Serotonin (mood)
  - Dopamine (well-being)
  - Endorphins (calming opioids)
  - Norepinephrine (energy/alertness)
If not accessing calming hormones, one is likely flooded with stress hormones (cortisol, adrenaline, etc.) Corticotropin-releasing factor (CRF) in the addicted brain blocks dopamine receptors. All this lessens ability to:

1. Think clearly
2. Use good judgment
3. Consider consequences of behavior
4. Accurately interpret social cues and interactions
5. Regulate mood and affect including experiencing pleasure
6. Learn new skills!
Philosophy of the Wellness Concept

- How can “feel-good” mood altering and calming neurochemicals be accessed?
  - Caffeine (Increase Dopamine/wellbeing, Adjusts Serotonin/mood)
  - Sugar (creates peaks/feel good and troughs/feel bad in glucose)
  - Balanced diet stabilizes body chemistry
  - Exercise (produces Endorphins)
  - Mindfulness (increases Serotonin and Dopamine)

- What if we designed a program built upon the hypothesis:
  - If prohibit AOD, need to replace what is missing!
Wellness Exercise

BREATHING
THREE COMPONENTS TO THE FMC WELLNESS PROGRAM.

1. Exercise
2. Nutrition

Department of Justice Key Components of a Treatment Program.
Addiction is associated with numerous neurobiological and psychosocial variables. But certainly, the neurobiological reinforcement system plays a role.

- Often called the “reward center” for dopamine.
- Depending on drug used, other neurobiological reinforcement systems may also be activated:
  - Serotonergic, opioid, or GABA systems

Drug use typically trumps natural pleasurable activities.
Drug use typically trumps natural pleasurable activities.

- “I’m sober...Now what?”
  - How to replace the feel good component or even just feel normal?

- The National Institute of Mental Health (NIMH) maintains chemical dependence is a brain disorder that is also responsive to changes in behaviors of exercise and diet.
Research: Exercise

Exercise as an adjunct for treating dependence to chemicals is well researched (Brown et al., 2010).

- Read and Brown (2003) noted, “The dopaminergic reinforcement mechanisms in the neural system that are activated by substances such as alcohol are also activated during exercise” (para. 3).
Ussher et al. (2004) studied the effect of exercise on alcohol urges and mood using a quasi-experimental design with two groups of patients that had just completed alcohol withdrawal in the hospital (mean of 3 days from detox).

The author’s concluded that a brief bout of moderate intensity exercise may provide some short-term relief from alcohol urges during exercise.
Some evidence for positive benefits of exercise in treating a variety of substances:

- Tobacco (Scerbo, et al., 2010);
- Marijuana (Buchowski, et al., 2011);
- Alcohol (Ussher et al., 2004);
- Cocaine (Smith et al., 2008);
- Opioids (Weinstock, Wadeson, & Vanheest, 2012);
- Methamphetamines (O’dell, Galvez, Ball, & Marshall, 2012).

- 6 recommendations for how to include exercise into treatment program.
- Consistent with the FMC approach to implementation.
Other benefits of exercise that indirectly support recovery from addiction:

- Mamen and peers (2011) noted improvement in oxygen uptake, and reduction in depression, anxiety, social phobia in 33 participants.

- Foret and Clemons (1996) that suggests that “Physically active people maintain and improve their physical functioning and are also able to handle stress more efficiently” (para. 2).
Nutrition therapy as an adjunct to substance abuse treatment.

- Nutrition and substance abuse treatment outcomes (Grant et al., 2004, Cadogan, 2011; Watts, 2011).
- Nutrition interventions are traditionally a missing component (Roberts, 2011).
Many people are not nutrition-savy while using harmful substances.

- Some people eat more during abuse (Nolan & Stolze, 2012), while many others do not get sufficient nutrition.

- The American Dietetic Association defends nutrition’s role in recovery.
How can nutrition be effective?

- Abnormal Neurobiochemistry, Neuroplasticity, Neuronal signaling and Neurophysiology can be improved or normalized with the help of nutritional interventions and nutritional therapy (Cadogan, 2011).
Lingley (2012) offers nutrition therapy for chemical abuse as a three stage process:

1. Education about the effects of the substance of the body;
2. Teaching proper nutrition and how certain foods support recovery;
3. Teaching the participant to shop and prepare.
Research: Nutrition

- Chance of recovery is “Significantly increased by adding nutritional therapy and exercise therapy” to traditional substance abuse recovery treatment (Shuman, 2000).
Diet and exercise are both shown to positively impact mental health outcomes (Foret & Clemons, 1996), and are clearly related to the final element of our treatment program: stress.
Research: Stress Management

- **Cognitive level:**
  - Stress increases the risk of developing drug addiction
  - Triggering relapse
  - Changes in the brain’s ability to mitigate stress once the person begins using (Schwabe, Dickinson, & Wolf, 2011).
Sinha, Shaham, & Heilig (2011) maintain that relapse is often associated with stress exposure, which can provoke a subjective state of drug craving that can also be demonstrated under controlled laboratory conditions.
Most effective model of stress management

Mindfulness-Based Stress Reduction (MBSR).

- Derived from Buddhist Vipassana meditation (Kabat-zinn)

Bowen (2009)

- Repeated studies shows significant reductions in participant’s
  - Self reported stress
  - Craving to use substances.
Research: Stress Management

- We modeled our MBSR approach
- Marcus (2007) studied the effectiveness of a MBSR approach in a residential chemical dependency treatment programs.
Wellness Exercise

RAISIN
Treatment Program Structure

- **Phase I:** 3 times a week for 3 hours
  - Includes wellness program one a week
- **Phase II:** twice a week for 3 hours
- **Phase III:** once a week for 2 hours
  - Focus on relapse prevention

- **Open-ended Intake**
- **Multi-disciplinary Treatment Team**
- **Mixed Gender**
Wellness Program Structure

- **Session 1: Nutrition**
  - Cravings and Nutrition

- **Session 2: MBSR**
  - Sitting Meditation & Mindful eating of raisin

- **Session 3: Exercise**
  - Neurobiological basis for recovery

- **Session 4: MBSR**
  - Body Scan
Wellness Program Structure

- **Session 5: Nutrition**
  - Planning a recovery diet

- **Session 6: MBSR**
  - Mindful Walking

- **Session 7: Exercise**
  - Stretching/Yoga

- **Session 8: MBSR**
  - “Seeing” meditation & visualization
Wellness Program Structure

- **Session 9: Nutrition**
  - Shopping for recovery diet

- **Session 10: MBSR**
  - S.T.O.P.

- **Session 11: Exercise**
  - Examples/Barriers/Plan

- **Session 12: MBSR**
  - Nonjudgmental Forgiveness
Sustainability of Program Gains/Behavior Changes

- **DDC THREE-PHASE TREATMENT PROGRAM**
- **COMMUNITY PARTNERSHIPS**
DDC Three-Phase Treatment Program

- **Nutrition: Phase 1 (3 months)**
  - Registered dietitian presentation (3 times)
  - Once a week clients are served a nutritious snack (12 times)
  - Sustainability of gains/behavior change every time client shops

- **Mindfulness: Phase 1-3 (9 months)**
  - Phase I yoga instruction (3 times)
  - Mindful breathing every group Phase 1-3 (72 times)
  - Sustainability of gains/behavior change every time client comes to group

- **Exercise: Phase 1 (3 months)**
  - Once a week 30 minutes Cardiac Rehab Gym (12 times)
  - Sustainability of gains/behavior change in question
  - Need for Community Partnership
Partnership with Flagstaff Family YMCA resulted in a no cost or reduced cost for a nine month membership for the client and family members living in the home (duration of DDC program). For most clients it is at no cost.
Community Partnerships: Sustainability of Exercise Gains/Behavior Change

**Benefits:**

- Continued opportunity for exercise and yoga instruction
- Family involvement addressed child care issues
- Opportunity for pro-social behavior in the community
- Northern Arizona College Resource Center (resume and scholarship application help)

**Funding source:** Private donations to YMCA and FMC Foundation (each pays 50% cost)
Need to insure safety exercising in Cardiac Rehab Gym

Health Risk Appraisal Form is completed

Health issues are reported

Need for medical clearance for exercise by a Primary Care Provider

Client is linked to a Primary Care Provider for medical care

FMC forms partnerships with community-based health care providers for no or low cost medical care (Native Americans for Community Action, Sacred Peaks, Poore Clinic)

Integration of Behavioral and Physical Health allows for improved health for both client and the community
Wellness Exercise

BODY SCAN
Practical Applications

Panel Discussion

- Practical exercises that can be used
- Collaborate
- Solicit community support
- Improved community wellness

Our dream/hope reduces cost globally, while maximizing use of existing providers/resources.


Shuman, S. (2000, June). Research into the place of nutritional therapy and exercise therapy in a program of recovery from substance addiction and process addiction. Dissertation Abstracts International, 60,


