What Works in Nutrition Counseling:
Using Evidence-Based Strategies
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Overview
• Behavior change theories
• Nutrition Care Process
• Evidence analysis process
• Results of Nutrition Counseling Project
  • Behavior change theories
  • Counseling strategies
  • Counseling demonstration
  • Counseling skill development

Why Theory-Based
Interventions and Strategies
• Evidence-base for nutrition counseling
• Critical to the nutrition care process (NCP)
  • Nutrition assessment
  • Selection of intervention strategies
  • Monitoring and evaluation indicator use
• Enhances provider impact
• Builds knowledge-base of the profession

Nutrition Care Process

NCP: Assessment/ Monitoring & Evaluation Indices
• Cues or triggers for inappropriate eating
• Stage of change
• Self-efficacy
• Outcome expectancy
• Perceptions: pros/cons, susceptibility, severity

NCP: Intervention
Strategies (cont)
• Self-monitoring
• Goal setting
• Rewards and contingency management
• Cognitive restructuring
• Social support
• Stress management
• Stimulus control
• Relapse prevention
Evidence Analysis Process

- Select topic & appoint expert workgroup/EAL staff
- Define questions & determine inclusion/exclusion criteria
- Synthesize evidence, draw conclusions & assign grade
- Conduct literature search and sort
- Abstract articles & appraise methodological rigor
- Publish on the ADA Evidence Analysis Library

Nutrition Counseling Workgroup

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Question Format

What is the evidence that nutrition counseling based on __________ results in health/food behavior change in adults counseled in an outpatient or clinic setting?

Topics

- Cognitive behavioral therapy (CBT)
  - Short duration (< 6 mon)
  - Intermediate duration (6-12 mon)
  - Long-term (> 12 mon)
- Targeted to
  - Cardiovascular disease
  - Diabetes prevention or delayed onset
  - Diabetes management
  - Weight management

- Transtheoretical Model
- Social Cognitive Theory/Social Learning Theory
- Targeted to
  - Cardiovascular disease
  - Diabetes management
  - Weight management
### Topics

- Maintenance of health/behavior change following short-term CBT
- Group versus individual counseling
- Dose (treatment length/intensity)

### Question Format

What is the evidence that the behavioral strategy of _____, used as a component of a behavioral program, will result in health or food behavior change in adults counseled in an outpatient or clinic setting?

### Behavior Change Strategies

- Motivational interviewing
- Goal setting
- Self-monitoring
- Problem-solving
- Social support
- Stress management

### Nutrition Counseling Project

ADA Evidence Analysis Library
- ADA members are preregistered
- Non-ADA members may subscribe

http://www.adaevidencelibrary.com

Nutrition Intervention

http://www.adaevidencelibrary.com/topic.cfm?cat=3151
Inclusion Criteria:
- Adult subjects
- Counseled in the outpatient setting
- Published between 1986–2007
- Peer reviewed
- English language
- Sample size > 10 per treatment group
- Dropout rate < 30%

Exclusion Criteria
- Dx eating disorders

Cognitive Behavioral Therapy
- Plethora of evidence (45 articles)
- Significant effect with all groups
- Strong evidence for interventions
  - Long-term (>18 months) targeting CVD
  - Long-term (>12 months) for diabetes prevention
  - Intermediate length for diabetes management
- Fair evidence for intervention
  - Long-term (> 12 months) for weight management
  - Short-term (< 6 months) for diabetes management
- Additional research needed to address:
  - Sustainment of benefits achieved with CBT
**Cognitive Behavioral Theory**

- Beneficial in facilitating modification of targeted dietary habits
  - Decreased calories from fat
  - Decreased sodium
  - Increased intake of fruits & vegetables
  - Weight, CVD & diabetes risk factors
- Grade 1

**Group versus Individual Counseling**

- Research available for diabetes/weigh only
  - Three RCTs evaluated diabetes or weight management for middle aged subjects
    - Positive quality studies
    - 3-6 month intervention duration
    - Groups significantly more effective
    - Attrition rates high in two studies
- Grade II

**Dose of Nutrition Counseling**

- No studies evaluated dose of nutrition counseling as an independent variable in nutrition intervention studies
- Grade V

**Transtheoretical Model**

- One RCT supported application to health and food behavior change
  - Impact of stage appropriate counseling on diabetes management
  - Stage matched materials
  - Personalized assessment reports
  - Telephone calls monthly
  - Newsletters every other month
- Grade III

**Transtheoretical Model**

- Much research to validate instruments in dietary context
- Little intervention research of nutrition counseling of adults

**Social Cognitive Theory**

- One RCT - positive effect on reducing saturated fat & cholesterol intake
  - 6 telephone sessions
    - Targeted to self-efficacy
    - Verbal persuasion
    - Goal setting
    - Self-monitoring
    - Self-reinforcement
- One RCT in diabetes - no added benefit to an education intervention
- Grade III
Grade I

- Self-monitoring
  - Three RCTs, three observational studies
- Reward strategies
  - Two RCTs, one meta-analysis
  - NOT effective
- Motivational interviewing
- Meal replacements or structured meals

Motivational Interviewing

- Used alone, no more effective than usual treatment
- Four RCTs added MI session(s) to CBT
  - Enhanced adherence to program
  - Improved outcomes
- MI as “phase one”
- CBT as “phase two”

Meal Replacements or Structured Meal Plans

- Nutrition counseling strategies because they help participants control their food intake by focusing on portion control as they attempt to modify their eating habits
- Four RTCs
  - compared to self-selected diets
  - significant improvements in health outcomes and food behavior change
  - Additional research needed on long-term effects

Grade II

- Problem-solving
  - Two small RCTs
- Social support
  - Mixed results. More research needed
- Client self-selected goal setting
  - Realistic, measurable
  - Included goal attainment training
  - Two RCTs

Grade III

- Cognitive restructuring
  - One RCT
  - No effect
  - More research needed

Grade V - No Recent Evidence

- Stress management
- Stimulus control
**Case Study**

**Assessment data**
- 2 meals/day (L/D); sweet snack ~2pm
- Drinks sweetened tea throughout day ~1L/d
- No previous diet counseling; declined diabetes educ program
- 5'6", 195 lbs, BMI 31.5

- New onset type 2 diabetes (T2D)
- HbgA1c: 8.6%
- Fasting BS: 427 mg/dl
- 54 y.o.
- Female
- Sedentary lifestyle
- Family hx T2D

**Nutrition Care Process**

- Potential nutrition diagnosis
  - Food and nutrition-related knowledge deficit
  - Excessive carbohydrate intake
  - Not ready for lifestyle change

- PES statement
  - Problem: Not ready for diet change
  - Etiology: Repeated weight loss/diet change failure
  - S/S: Declined diabetes education program, poor compliance with past diets

**Behavior Change Theory & Strategies**

**Theory:** Transtheoretical Model

**Strategies:** Motivational Interviewing
- Rolling with resistance
- Open questions

**Strategies (cont)**
- Affirming
- Reflecting
- Summarizing
- Self-monitoring
- Goal setting (?)

**Nutrition Care Process**

- Intervention—Nutrition Counseling
  - Transtheoretical Model
  - Motivational interviewing
  - Self-monitoring
  - Goal setting

- M&E depends on diagnosis/intervention
  - Readiness to change
  - Sweetened tea intake

**Nutrition Intervention**

What theory(s) was this counseling based on?

What strategies did you notice?

**Case Study Visit 2**

- Assessment data
  - Two meals/day with sweet snack
  - Substituting water and diet beverages for sweetened tea
  - Pre action stage of change
  - Fasting BS: 205 mg/dl

- PES statement
  - Problem: Not ready for diet change
  - Etiology: Repeated weight loss/diet change failure
  - S/S: Declined diabetes education program, poor compliance with past diets
Nutrition Care Process

- Intervention
- Theory
  - Transtheoretical Model
- Strategies
  - Motivational interviewing
  - Self-monitoring
  - Problem solving
  - Shaping
  - Goal setting
- Monitoring and evaluation
  - Readiness to change
  - Food intake

O. K. Now what?

“How to implement a personal skills plan to integrate evidence-based nutrition counseling skills”

The Bottom Line

- Comfort doesn’t equal competence
- Record sessions and analyze and/or look for supervision
- Go back and practice specific skills over and over
- You are never done

Training Options

- Commission on Dietetic Registration, www.cdrnet.org; Certificate of Training in Weight Management
- American Association of Diabetes Educators: http://www.diabetesseducator.org/
- Institute for Healthcare Communication: http://www.healthcarecomm.org/
- Motivational Interviewing: www.motivationalinterview.org
- Local college counseling courses

Books

- Evidence-Based Practice of Cognitive-Behavioral Therapy; Deborah Dobson & Keith S. Dobson
- Motivational Interviewing, William Miller & Stephen Rollnick
- Motivational Interviewing in Health Care, Stephen Rollnick, William Miller, Christopher Butler
- Counseling Tips for Nutrition Therapists: Practice Workbook Series, Molly Kellogg
**Feedback & Coaching Options**

- Record sessions
- Motivational Interviewing: [www.motivationalinterview.org](http://www.motivationalinterview.org)
- Find a local mental health professional

**Transtheoretical Model**

- Stages of change
  - Precontemplation
  - Contemplation
  - Preparation
  - Action
  - Maintenance

- Decision balance
- Self-efficacy

**Social Cognitive Theory**

- Cognitive behavioral therapy
- All behavior is learned
- Behavior follows directly from triggers
  - Internal: thoughts and thinking
  - External: environment stimulus and reinforcement
- Cognitive/behavioral strategies used to identify, disrupt & replace undesirable eating

**Strategies:**

- Observational learning
- Peer modeling
- Testimonials
- Skill development training
- Sequential goal setting