Case Studies of Interventions on Diet and Physical Activity – Best Practice for Increasing Physical Activity in the Context of a Healthy Lifestyle

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Objectives

• Describe components necessary to promote changes in diet and physical activity.
• Discuss existing challenges of current approaches to changing these behaviours at the population level; and
• Provide real world examples of interventions and on-going efforts to change diet and physical activity to promote a healthy lifestyle.
Framework of determinants of physical activity and eating behaviour

Diet and Physical Activity – Complex Behaviours

- Number of factors found to be significantly associated with physical activity in adults = 60+
- Factors associated with diet and PA are not necessarily the same
- Typically researched independent of one another
- Diet and PA also associated and impact one another
Common barriers to changing diet and PA behaviours

- Time
- Resources
- Access/opportunity
- Support
Challenges to Changing Diet and PA Behaviours at Population Level

- Behaviour change is mostly researched at the individual level.
- Complexity surrounding how to study impact of interventions distal to individuals (e.g. schools, work sites, communities).
- Complexity surrounding how to study impact of multilevel interventions (e.g. changing physical and social environments).
Challenges to Changing Diet and PA Behaviours at Population Level

- Most programmes outside of research setting are not fully evaluated due to lack of resource and expertise
- Use of self-report measures very common
- Integrating change programmes across various segments of communities to effect large scale change is very difficult
Real World Example 1
Promoting Physical Activity to Reduce Risks for Type 2 Diabetes and CVD – A Multiethnic Study

- Large community-based physical activity intervention comparing intervention and control districts in Oslo, Norway
- Participatory approach
- Tailored program for ethnicity and stage of change
- Measured PA levels, weight, blood lipids and glucose – baseline and 3 year follow-up
Intervention Efforts

- Leaflets
- Local meetings
- Mass media
- Individual PA counseling (biannually)
- Organised walking groups and indoor activity groups (no cost)
- Encouragement of PA via work sites
- Information sessions at Norwegian language classes
- Labeling of walking trails
- Improved street lighting
- Gritting of pavements and trails in winter
Results

- % of people reporting heavy physical activity = 9.5% higher in intervention
- Body weight increased in both districts
- Proportion who increased body weight = 14.2% lower in intervention
- Small but significant improvements in systolic BP, triglycerides, blood glucose
- Men experienced greater improvements than women
Real World Example 2
Efforts to Increase Physical Activity in UK Communities

- Cycling Demonstration Towns
- Healthy Towns – diet and/or PA
- Sustrans’ Connect2 initiative
- None of these initiatives have reported outcomes to date
Real World Example 3
National Weight Control Registry (USA)

Largest prospective investigation of successful long-term weight loss

Established in 1994

Tracking over 10,000 individuals who have lost significant amounts of weight and kept it off over time

18 yrs or older and have maintained at least a 30 pound weight loss for one year
National Weight Control Registry Facts

- 80% in registry are women
- Average wt loss = 66 lbs
- Kept off for 5.5 yrs
- Losses range from 30-300 lbs
- Duration of loss 1 yr to 66 yrs
- 45% lost weight on own
- 98% modified diet
- 94% increased PA
- Average PA = 1 hour per day
- Walking (52%) and strength training (29%) most common
Conclusions

• Diet and physical activity are complex, multi-dimensional behaviours
• Intrinsic (individual) and extrinsic (environmental) factors influence ability to change these behaviours
• Evidence to suggest long-term sustained change is possible
• Integrated changes to proximal and distal factors that impact these behaviours are necessary to support population changes