

**Title of Intervention and Website:** Reinforcing physical activity in obese children

**Intervention Strategies:** Supportive Relationships, Individual Education, Group Education

**Purpose of the Intervention:** To reinforce children to be more active or less sedentary

**Population:** Obese children 8 to 12 years old and their parents

**Setting:** Home-based

**Partners:** None mentioned

**Intervention Description:** Reinforcing children to be more active or less sedentary was tested to observe the weight changes in obese children.

- Supportive Relationships: During meetings, therapists weighed and counseled the parents and children, provided performance feedback and ensured that both parent and child were given their earned contract rewards. Parents were trained to negotiate and write contracts with their children.
- Individual education: Parents and children received written manuals on the positive effects of increased physical activity and the negative effects of sedentary behaviors. Participants were reinforced for increasing physical activity and decreased sedentary activity. Individual meetings with children and parents encouraged following the Traffic Light Diet (foods categorized as red, yellow or green on the basis of their calorie and nutrient content).
- Group education: Group meetings were available for parents and children separately.

**Theory:** None mentioned

**Resources Required:**

- Staff/Volunteers: licensed therapist, exam graders
- Training: not mentioned
- Technology: not mentioned
- Space: group meetings
- Budget: not mentioned
- Intervention: The Traffic Light Diet, activity manuals,
- Evaluation: questionnaires, a computer based laboratory-choice, height board, balance-beam scale, electrical impedance monitor, measuring tape, bicycle

**Evaluation:**

- Design: Randomized controlled trial – three treatment groups
  - Sedentary group: reinforced when they decreased sedentary activity.
  - Exercise group: reinforced when they increased physical activity.
  - Combined group: reinforced when they decreased sedentary activity and increased physical activity.
- Methods and Measures:
  - Anthropometric measures and fitness (height, weight, percent body fat, physical work capacity).
  - Activity preference was assessed by a questionnaire. Energy intake and compliance to treatment goals were measured by habit books.

**Outcomes:**

- Short Term Impact: At 4 months a significant treatment effect was observed for child preference of high-intensity activities with children in the sedentary group over the exercise group. Reinforcements increased physical activity and sedentary activity.
- Long Term Impact: Child fitness changed significantly over time. Children who were reinforced for reducing sedentary behaviors showed better changes in percentage overweight and percentage of body fat than did children who were reinforced for exercising. Significant differences in energy intake were also observed, with the exercise group showing the greatest intake at the end of treatment and losing the least weight.

**Maintenance:** Not mentioned

**Lessons Learned:** Reducing access to television and other sedentary behaviors may be important in treating childhood obesity. Reinforcing a reduction in specific sedentary behaviors provides children the opportunity to choose how to allocate newly available time. The opportunity to choose among alternatives is further reinforcing.

**Citation(s):**

Epstein, L. H., A. M. Valoski, et al. (1995). "Effects of decreasing sedentary behavior and increasing activity on weight change in obese children." *Health Psychol* 14(2): 109-15.