

# Changes in Physical Activity Among Participants of the *Traditions of the Heart* Intervention

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# Statement of Problem

- Cardiovascular disease (CVD) is the leading cause of death among women in the United States
- Mortality rates are particularly high in women of low socio-economic status or from ethnic minority groups
- Lifestyle related risk factors such as physical inactivity and diet are important causes of CVD and are key targets for intervention projects

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# TOTH Intervention

- Intervention Components:
  - Physical Activity
  - Diet
  - Stress Management
  - Tobacco cessation
- Roughly 1/3 of the intervention devoted to imparting knowledge, skills, and self-efficacy related to low impact physical activity
- Intervention duration- 12 weekly 2 hour sessions

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# Physical Activity Components

- Strength exercise with therabands
- Stretching Tips
- Making a plan for physical activity
- Activity pyramid
- Chair exercises
- Becoming more active
- Checking your heart rate
- Safety tips for exercise
- Using your pedometer
- Beginning a walking program

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# Activities

- Secondary Data Analysis of the TOTH dataset from 2000-2005
- Describe population characteristics
- Determine changes at pre and post intervention related to:
  - Level of physical activity
  - Perceived barriers to physical activity

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# Hypothesis

- There is a statistically significant increase in standard metabolic equivalent (MET) level from pre to post intervention in those participants who attended at least half (6 or more) intervention sessions
- Regardless of change in MET level, individual perceived barriers to physical activity will decrease

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# Study Sample Criteria

- Enrolled in TOTH study from 2000-2005
- Attended at least 1 intervention session
- Completed both pre and post intervention assessment
- Completed baseline clinical screening
- Completed baseline screening questionnaire

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# Study Population for Secondary Data Analysis

- Alaska Native or American Indian
- Female
- Eligible to receive services at the Alaska Native Medical Center
- Age 40-64 years
- Community of residence in the Anchorage Bowl
- Eligible to participate in the National Breast and Cervical Cancer Early Detection Program

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# Study Variables and Measures

- Baseline clinical assessment
- 'How Active Are You?' questionnaire
  - Frequency and duration assessment
  - 31 questions
  - Algorithm yielding weekly energy expenditure and time spent in moderate activity
- 'What Makes It Hard To Keep Active' questionnaire
  - Barrier Assessment
  - 16 questions
- 'Food, Activity and You' questionnaire
  - Stages of change assessment
  - 1 question

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# Statistical Analyses

- 'How Active Are You?'
  - Calculation of weekly energy expenditure
  - One-sided paired t-test
- Demographic characteristics
  - Descriptive statistics with cross tabulations by activity level at baseline
- 'What makes it hard to keep active'
  - Cross tabulations by barrier compared to education level, total # sessions attended, and activity level at baseline
  - One-sided paired t-test
- 'Food activity and You'
  - Descriptive statistics with cross tabulations by activity level at baseline

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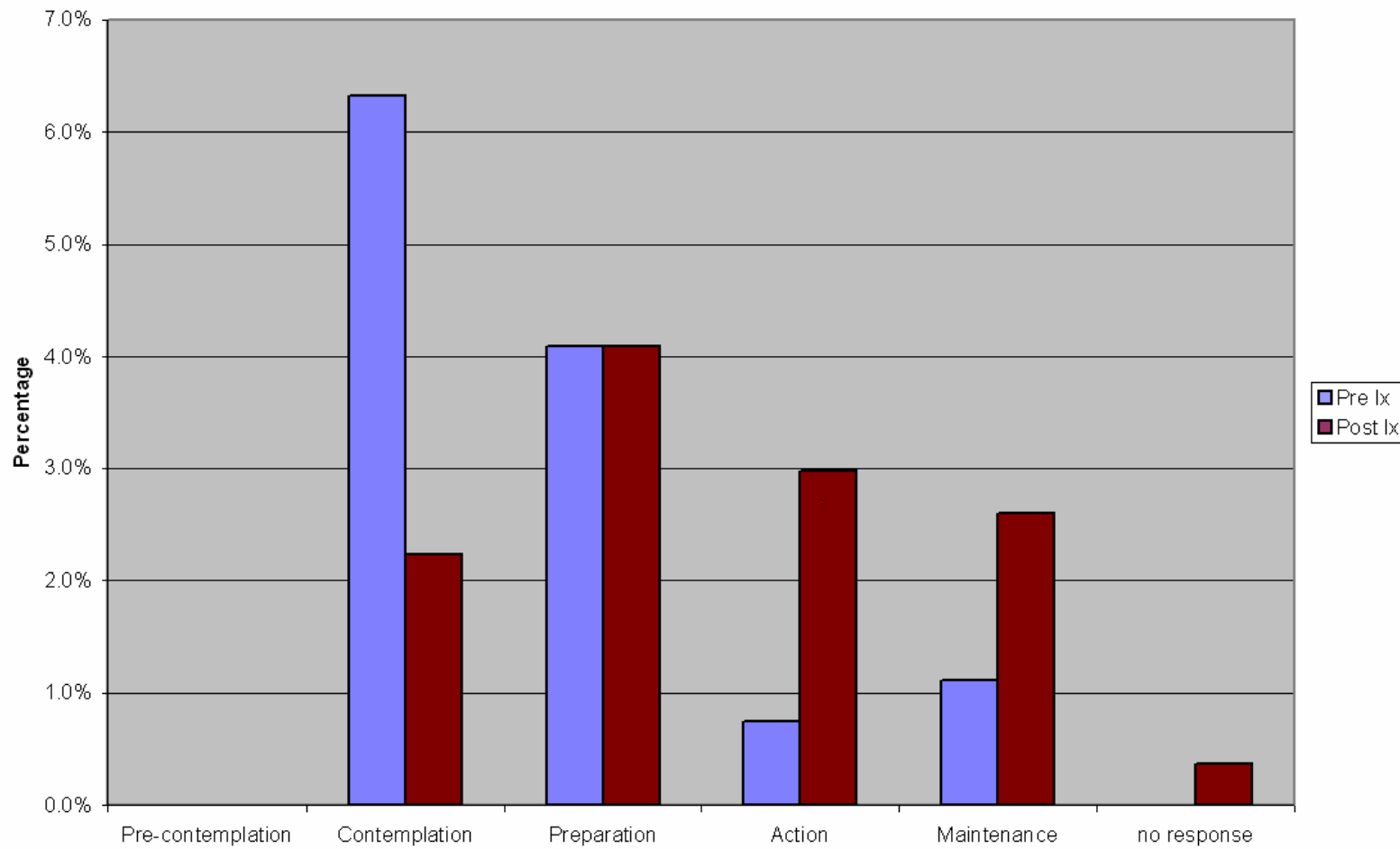
# Results- Demographics

- 67% college educated or higher
- 22% current smokers
- 3.72% current smokeless tobacco users
- 41% history of hypertension, with 15% having blood pressure values indicating hypertension
- 41% history of hypercholestermia with 23% blood total cholesterol values above 200mg/dL
- Average BMI was 31.28 (SD of 6.55)
  - 44.25% BMI indicating overweight
  - 9.29% BMI indicating obesity

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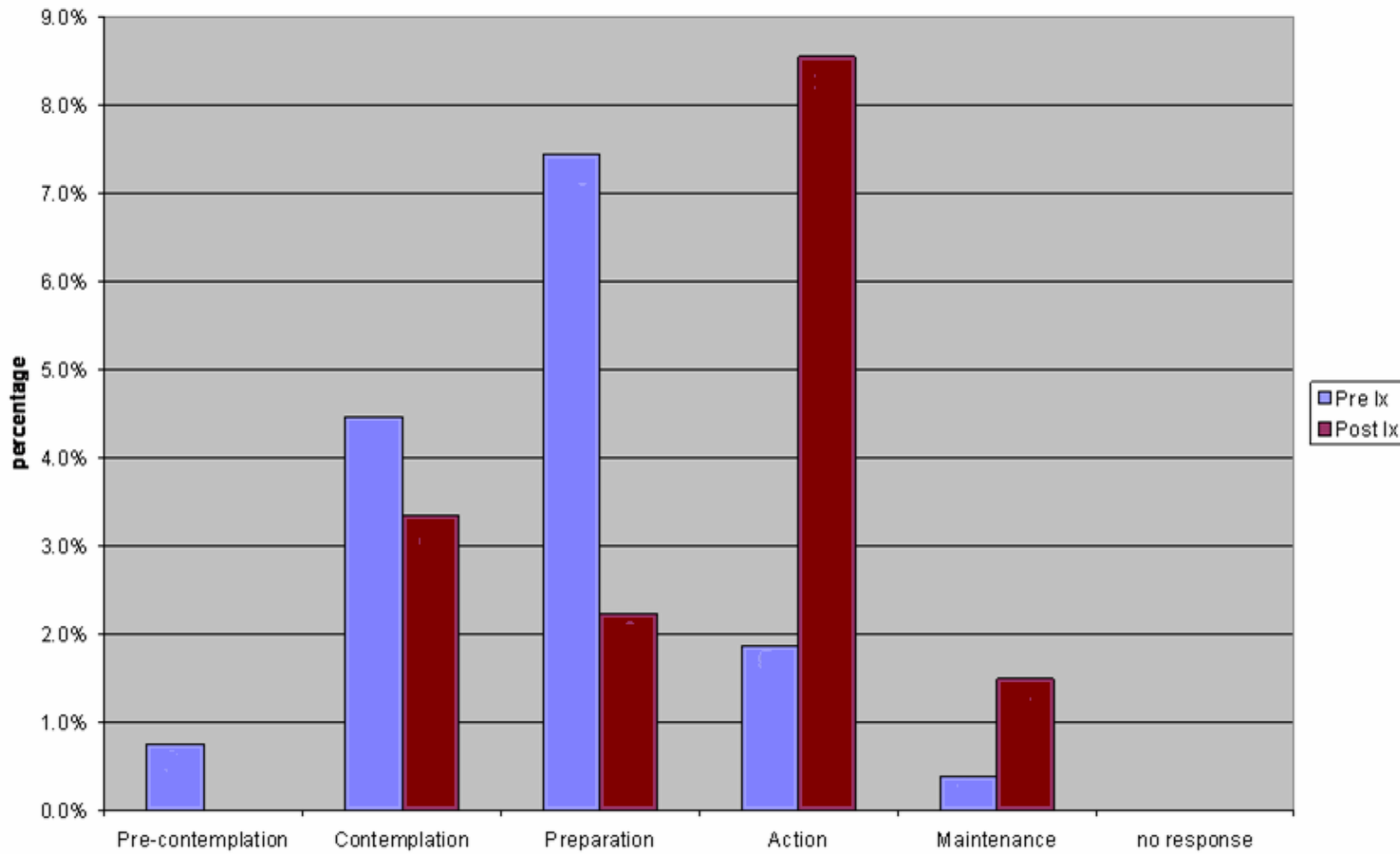
Stage of Change for Low Activity Level Participants at Pre and Post Intervention



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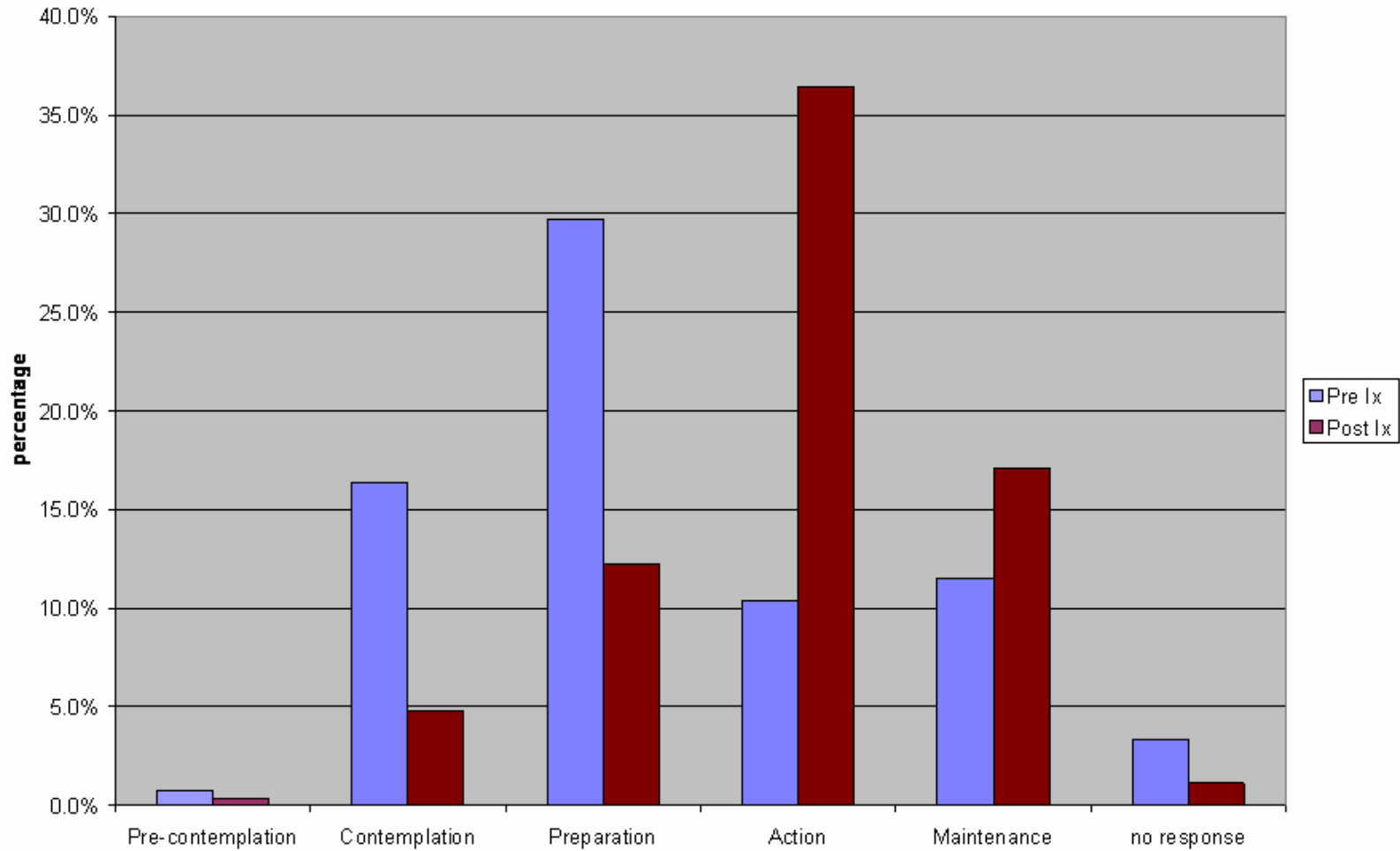
**Stage of Change for Moderately Active Participants at Pre and Post Intervention**



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### Stage of Change for Vigorously Active Participants at Pre and Post Intervention



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# Results- Activity Level

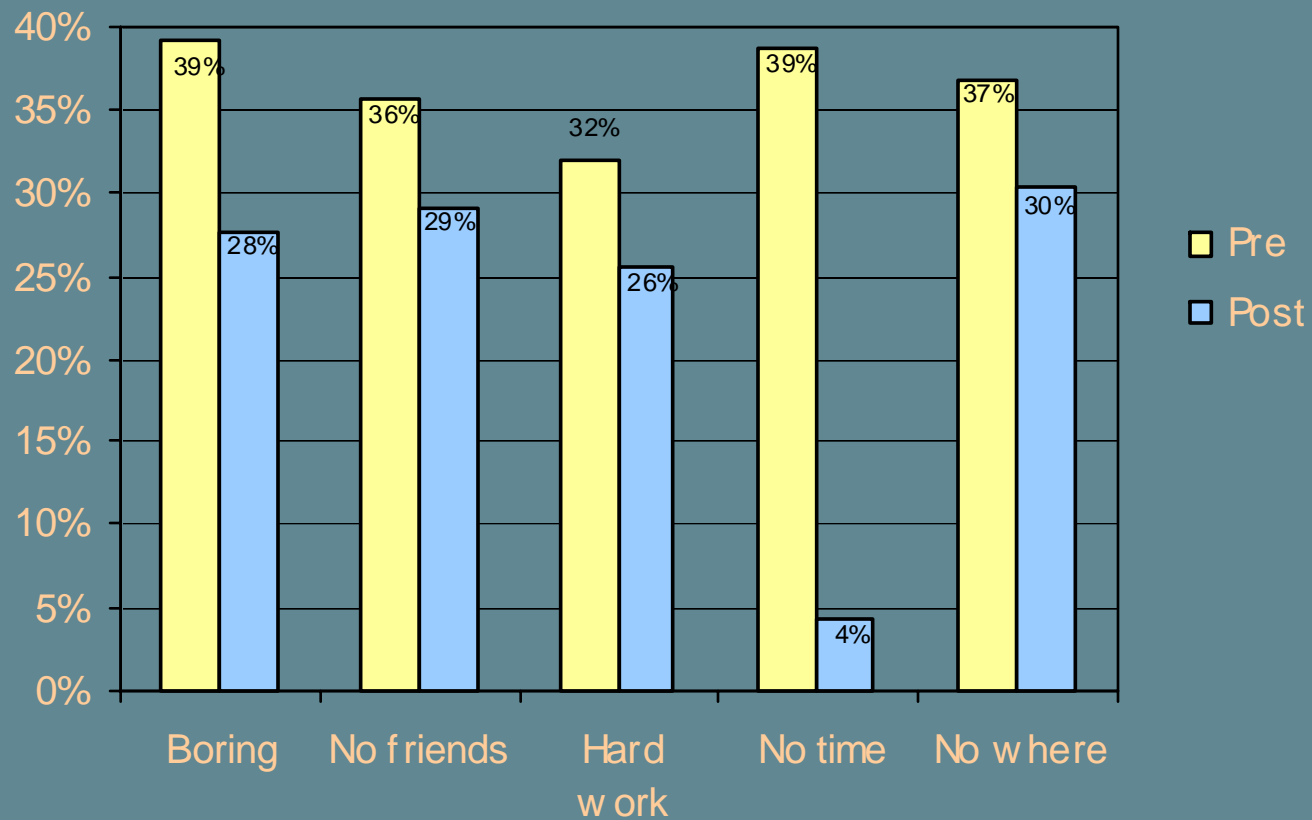
Weekly Energy Expenditure (Kcal/kg/week)				P-value		
Sessions Attended	N	Pre	Post	Weekly Energy Expenditure (Kcal/kg/wk)	Weekly Energy Expenditure (Kcal/week)	Total Time Engaged in Moderate Intensity Activity (hr/week)
1 or more	269	5950.96	6972.10	0.0109*	0.0137*	0.0001*
6 or more	261	5867.22	6890.63	0.0117*	0.0140*	0.0001*
All 12	52	5368.91	6035.61	0.2722	0.1386	0.1025

\* indicates that the p-value is statistically significant

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## Selected Perceived Barriers to Physical Activity At Pre and Post TOTH WISEWOMAN Intervention



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# Discussion

- Indications that the intervention promoted positive movement...
  - along the continuum of stage of change,
  - in perceived barriers to physical activity,
  - in time spent engaged in physical activity, and
  - increases in actual energy expenditure.
- However, difficult to determine if the TOTH intervention assists sedentary women

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