

Promoting Health: Knowledge and Strategies for Developing Successful Health Programs

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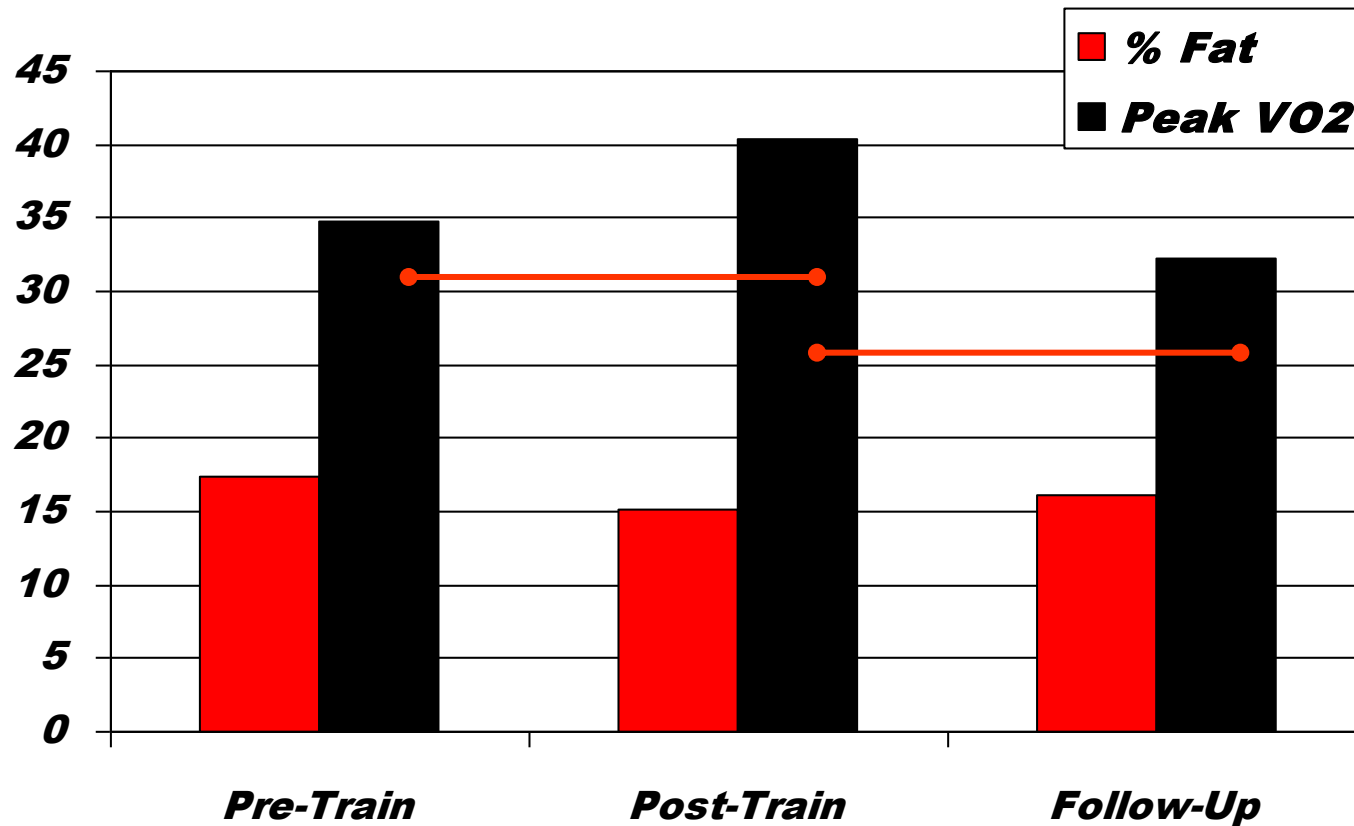
Prescribing Physical Activity for Health

- *F*requency
 - Most days of the week (ie. 5 days)
- *I*ntensity
 - Moderate-intensity (50%-75% maximum heart rate)
 - MHR = 220-Age
 - Observable signs
 - Light perspiration, skin color, breathing rate
- *T*ime
 - 30 minutes (can be accumulated - 15 + 15)
- *T*ype
 - Aerobic activities (walking, cycling, movement to music)

Evidenced-based Strategies: *Effects of a minimally supervised exercise program for mentally retarded adults* (Pitetti & Tan, 1991)

- Participants: 12 PWID in supported work
- Measures: Peak oxygen uptake, cycle ergometer
- **F**requency: **Daily** for 16 weeks
- **I**ntensity: 50%-70% of peak aerobic score (**moderate**)
- **T**ime: 12 mins **progressing** to 30 mins
- **T**ype: Cycling on an exercise bike
- Unique: **Minimally supervised** @ worksite
Heart rate monitors
Specialised exercise bike

Effects of a minimally supervised exercise program for mentally retarded adults (Pitetti & Tan, 1991)



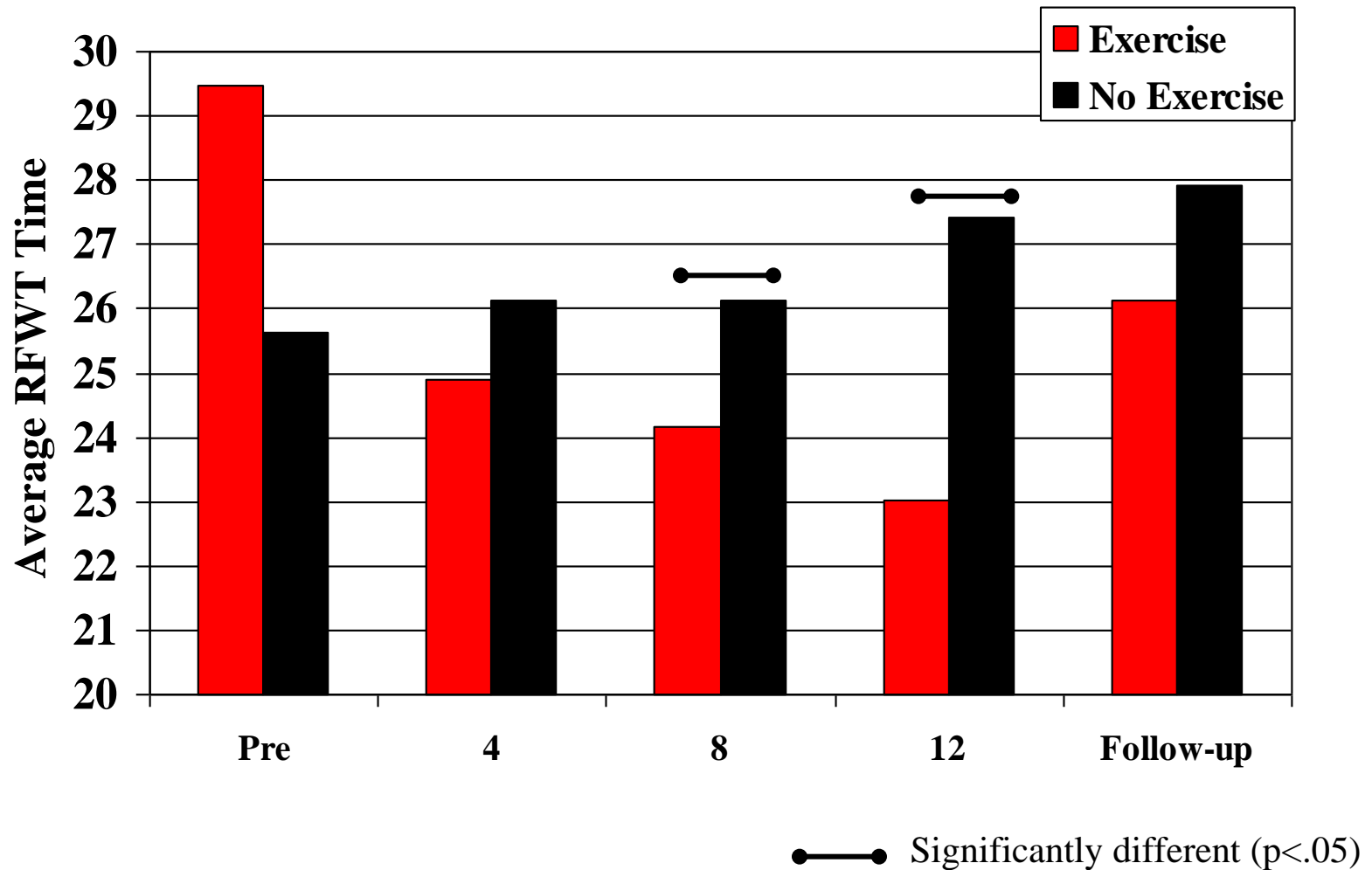
—●—● Significantly different ($p < .05$)

Evidenced-based Strategies: *Effects of Aerobic Dance on the Cardiovascular Endurance of Adults with Intellectual Disabilities*

(Cluphf, O'Connor & Vanin, 2000).

- Participants: 15 PWID in Supported Work
- Measure: Rockport Fitness Walking Test
Predict VO₂, time, distance walked (**field test**)
- **F**requency: 3-days/week for 12 weeks
- **I**ntensity: Moderate intensity
- **T**ime: 12 mins progressing to 30 mins
- **T**ype: **Movement to music**
- Unique: Worksite, token economy

Effects of Aerobic Dance on the Cardiovascular Endurance of Adults with Intellectual Disabilities (Cluphf, O'Connor & Vanin, 2000).



Active Experience

- What is moderate intensity physical activity?
 - What does it feel like?
- How can this be achieved?
 - Safety
 - Include people of varying ability
- What benefits are gained from engagement in regular moderate intensity physical activity?
 - Participants?
 - Staff?

Active for Life Project

- Participants: 11 PWID in Supported Work/Place
- Measures: Peak oxygen uptake, **work productivity**

- **F**requency: 5-days/week for 12 weeks
4 week Xmas break
5-days/week for 16 weeks
- **I**ntensity: 50%-70% of peak aerobic score (moderate)
- **T**ime: 12 mins progressing to 30 mins
- **T**ype: Cycling on an exercise bike

- Unique: Worksite
No heart rate monitors
Standard exercise bike
Token economy

Walkley, Temple, Simmons, Greenway, Klein, (2003) *MS&SE* (35)

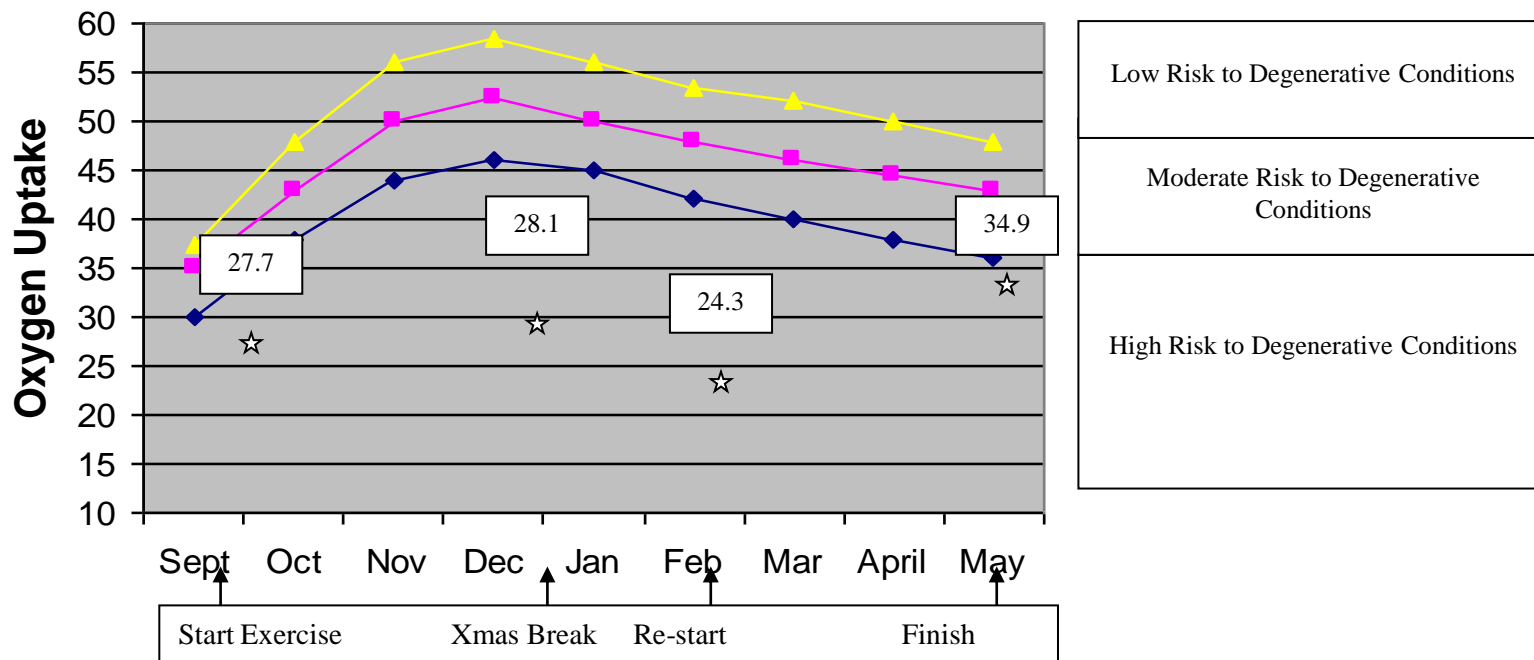
Familiarisation & Training



Active for Life

Tracking Phenomena of Cardiovascular Fitness*

Female, 25 years

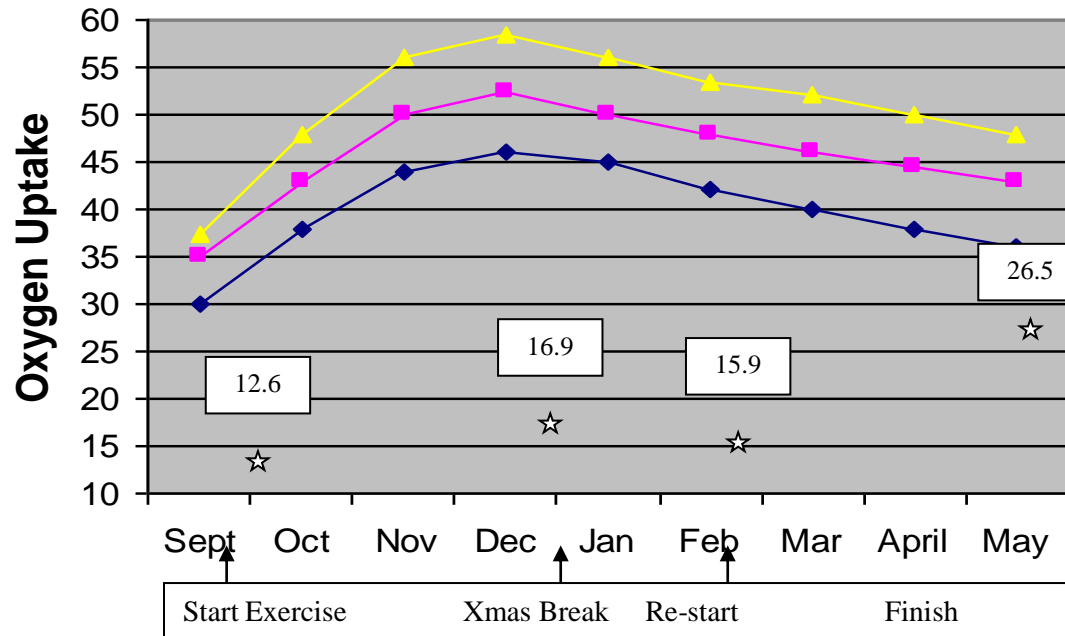


* Dodson, C (1988). Health Fitness Standards: Aerobic Endurance, Journal of Health, Physical Education, Recreation and Dance. September, pp. 26-31.

Active for Life

Tracking Phenomena of Cardiovascular Fitness*

Female, 25 years



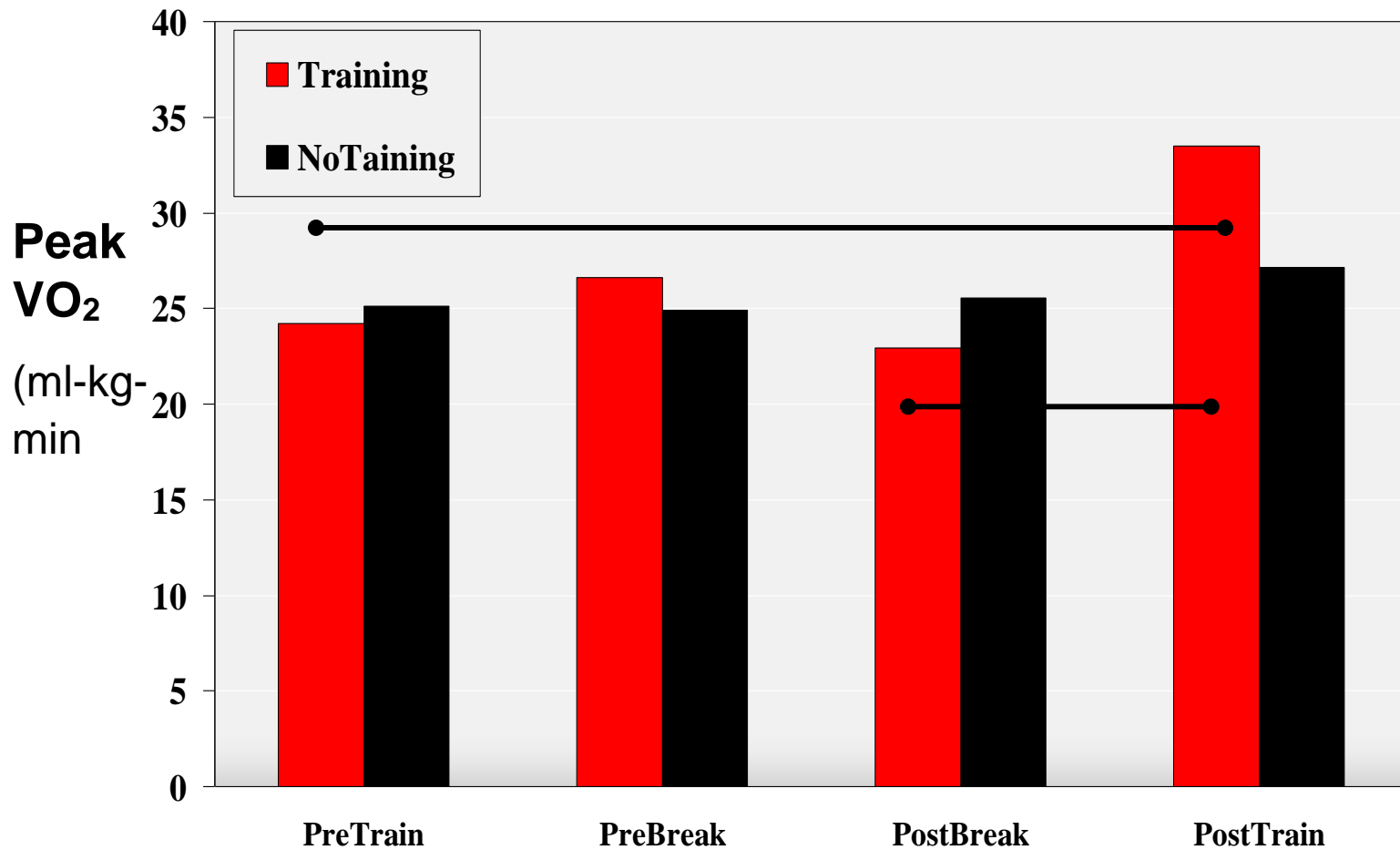
Low Risk to Degenerative Conditions
Moderate Risk to Degenerative Conditions
High Risk to Degenerative Conditions

* Dodson, C (1988). Health Fitness Standards: Aerobic Endurance, Journal of Health, Physical Education, Recreation and Dance. September, pp. 26-31.

Token Economy Support for Exercise Session Target

Date	April 9	April 10	April 11	April 12	April 18	April 19	April 20	April 23	April 24	April 25	April 26	April 27	April 30	May 1	May 2	May 3	May 4	May 7	Total	
Up to 350 Kcals (Silver)		★																		
351 to 374 Kcals (Blue)																				
375 or more Kcals (Gold)	★		★	★	★	★	★	★	★		★	★	★	★	★	★	★	★	★	★
Rewards:	<ul style="list-style-type: none"> ➤ Highlighter pen (1 Gold) ➤ Can of drink (1 Gold) ➤ Muffin/Mud Cake/Donut (1 Gold) ➤ Bookmark (2 Gold) ➤ Hot Chocolate (2 Gold) ➤ Block Chocolate with nuts (2 Gold) 					<ul style="list-style-type: none"> ➤ Novelty pen (2 Gold) ➤ Sport Socks (5 Gold) ➤ La Tan Cream (6 Gold) ➤ Book (8 Gold) ➤ Flowers (8 Gold) ➤ 2 Movie Tickets (12 Gold) 					<ul style="list-style-type: none"> ➤ Lunch with a friend (14 Gold) ➤ Picnic (15 Gold) ➤ BBQ (16 Gold) 					<ul style="list-style-type: none"> ☆ Exchanging Stars ☆ 3 Blue Stars = 1 Gold Star 2 Silver Stars = 1 Gold Star 				

Comparison of Fitness (Peak VO₂) for Participants by Training Group



—●— Repeated Measures ANOVA, significant $p < .05$

Active Recreation Project

Purpose

- Investigate the effect of a day centre physical activity program on health-related fitness of young adults with an intellectual disability

Key Features

- Evidenced-based
 - 30-minutes per day, most days of the week, moderate-intensity physical activity
 - Support from key workers
- Staff led and managed
- Low cost
 - Equipment, transport, staff
- Sustainable
 - Successful, weather resistant
- Transferable
 - Between staff & sites



Funded by VicHealth Promotion Foundation

Active Recreation Project

Management Engagement

- **Create a Partnership**
 - Existing relationship built on previous successful programs
 - Engaged staff
 - Successful, developing support from participants, staff and parents
 - Alignment with key public policy
 - Health promoting physical activity
 - Active support
 - Community inclusion
 - Management & Key Staff Support obtained
- **Program Considerations**
 - Daily 60 minute allocation on week planner, ~ 40 weeks (April – December)
 - Local champion seconded to project
 - On-site advocate, and role model

Active Recreation Project

Staff Training and Support

- 30 minute workshops embedded into existing bi-weekly 60-minute staff meetings
- Workshop topics included
 - Value
 - Adults with an Intellectual Disability & Staff,
 - Physical, psychological
 - Families
 - Psychological
 - Need
 - Health status of Adults with an Intellectual Disability – Local Evidence
 - What work's: equipment based activities
 - Exercise bikes
 - Exercise bands and mats
 - What work's: movement based activities
 - Active recreation (sports and active games)
 - Movement to Music
 - Walking



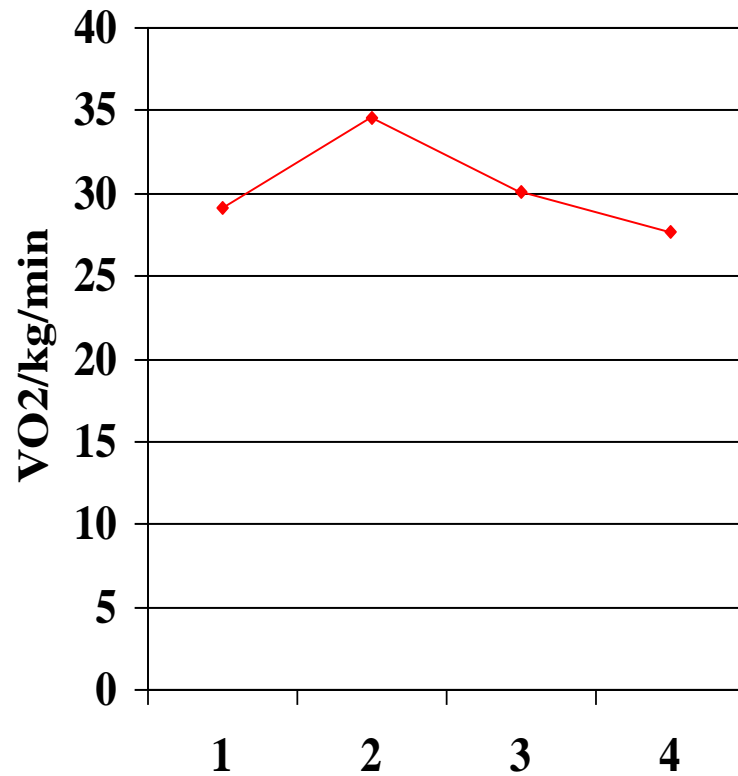
Measures

- Health-related focus
 - Heart, low-back pain, mental health
- Cardiovascular Fitness (ACSM, 1997)
 - Peak Oxygen Uptake
- Strength (ACSM, 1997)
 - Biceps Curl (Left & Right)
 - Bench Press
 - Seated Leg Press
 - 5-stage Curl-up
- Flexibility
 - Back Saver Sit & Reach (Left & Right)
 - Sit & Reach (Both)



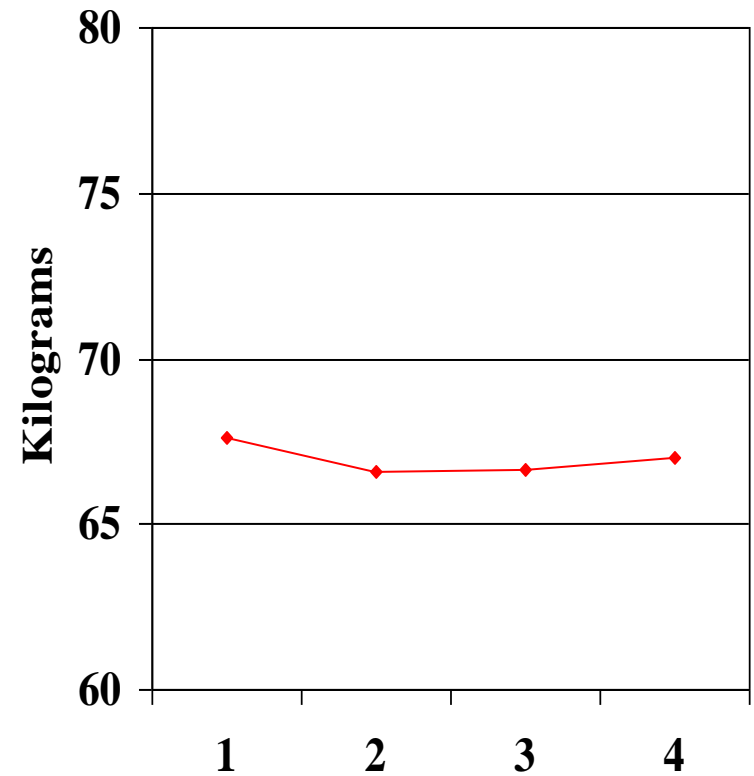
Cardiovascular Fitness & Weight

Peak VO₂



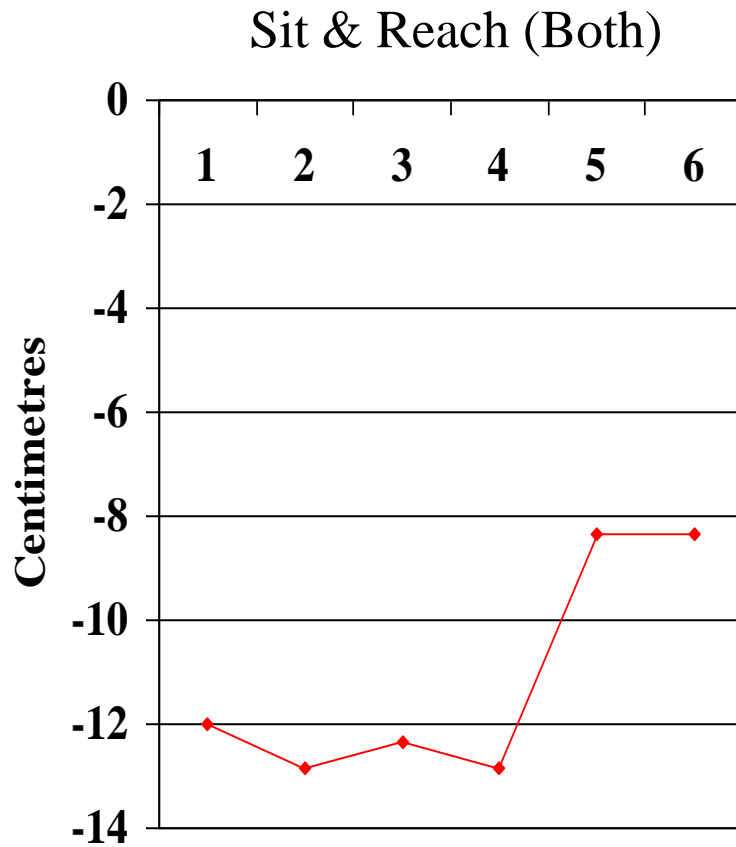
$t = 0.57, p = 0.25$

Weight

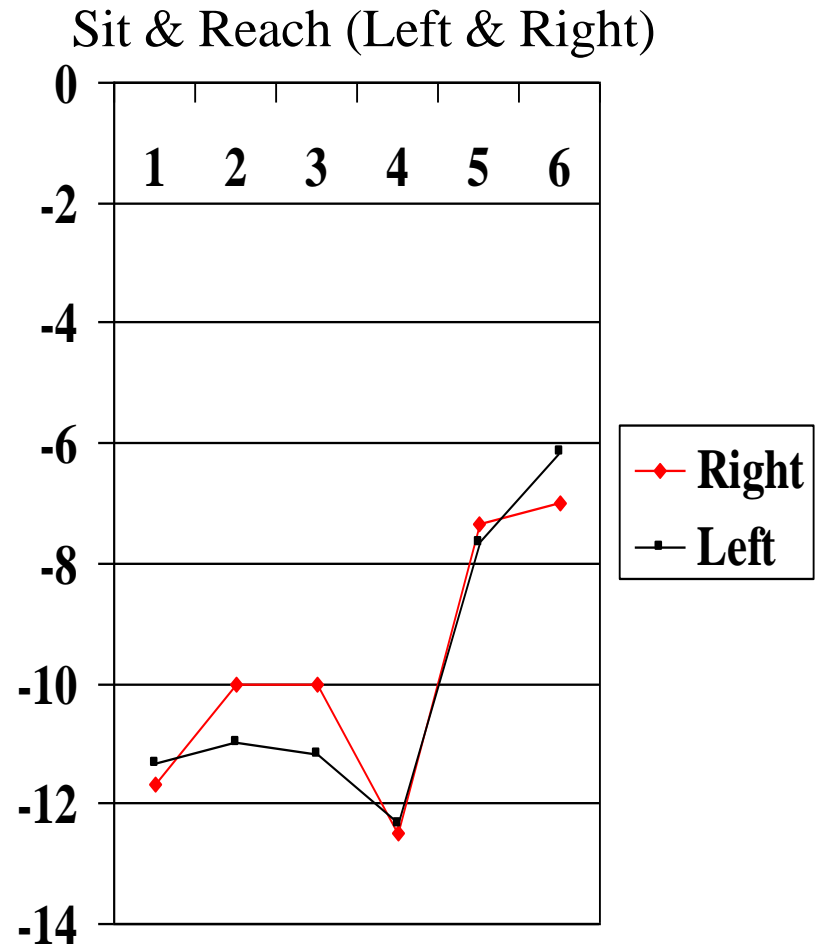


$t = 0.32, p = 0.38$

Flexibility



$t = -2.61, p = 0.24$

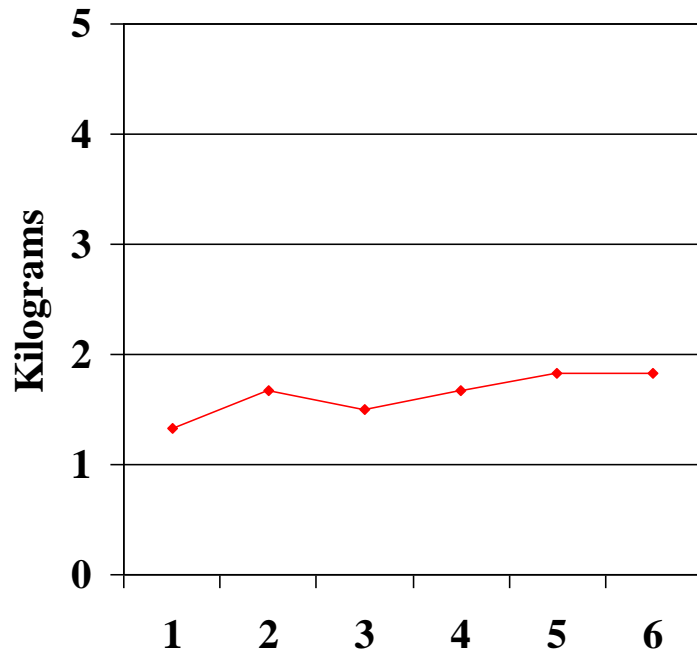


R: $t = -4.18, p < 0.01$

L: $t = -3.11, p = 0.01$

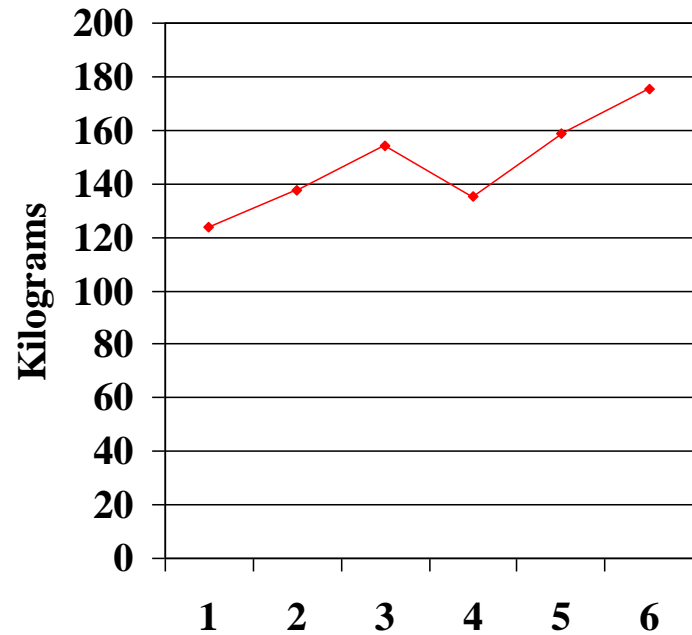
Strength

5-Stage Curl-up



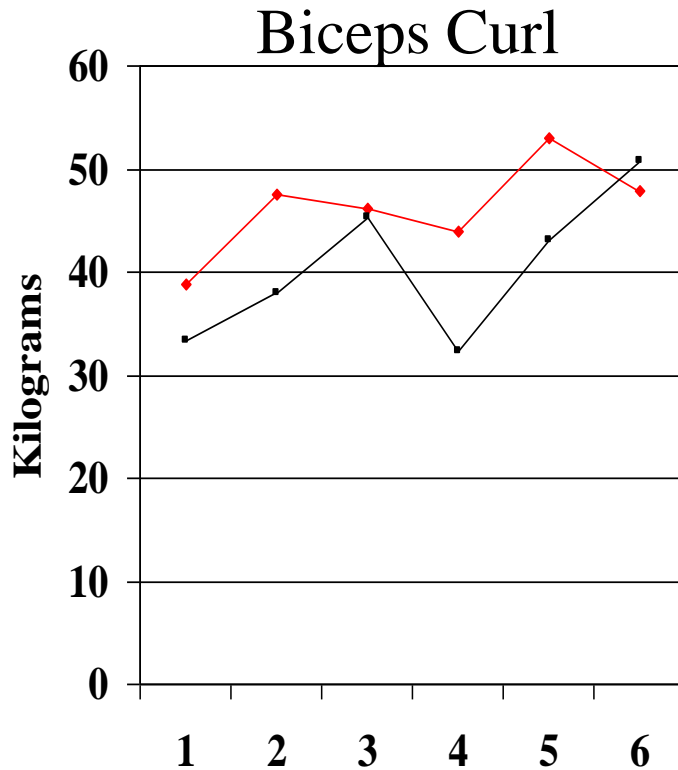
$t = -2.23, p = 0.04$

Bench Press



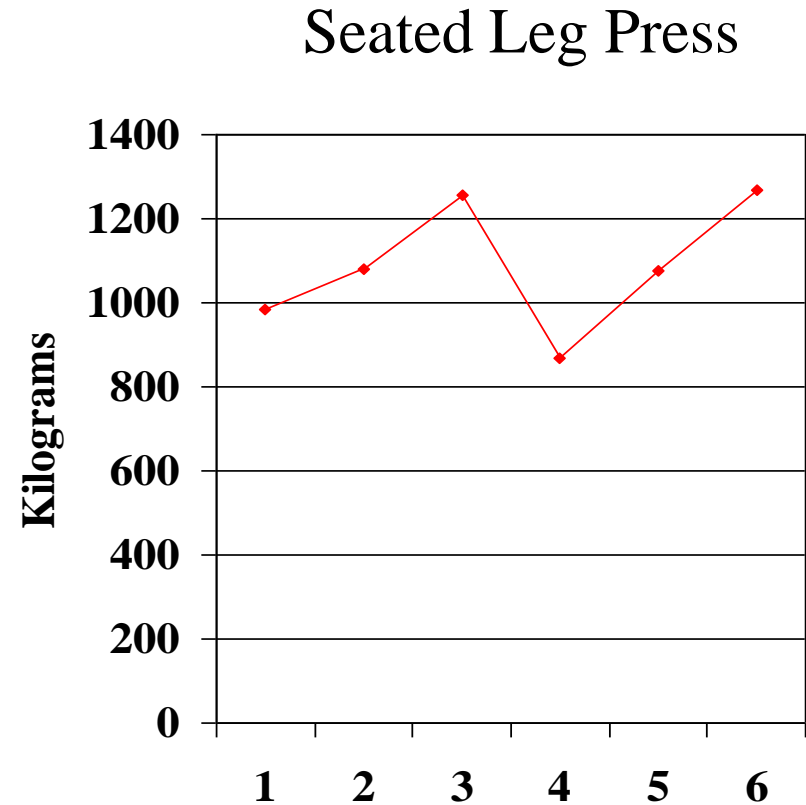
$t = -4.31, p < 0.01$

Strength



R: $t = -0.75$, $p = 0.24$

L: $t = -2.62$, $p = 0.02$



$t = -1.51$ $p = 0.10$

Conclusion

- Successful implementation of program
 - Participant reports initially variable, but became positive
 - Enjoyment, social engagement, fitness, health
 - Staff reports positive
 - Job fulfilment, participants more ‘settled, happier’
 - Parent reports positive
 - Childs’ health, improved family engagement
 - Daily physical activity a policy addition
 - Maintained, survived several management changes!
- Significant changes
 - Flexibility (Both, Left & Right)
 - Strength (Left Biceps Curl, Bench Press, 5-stage Curl-up)

Funded by VicHealth *Active Recreation* Grant

Summary

- Partnership approach
 - Local champions (staff advocate)
- Adhere to the FITT principles (moderate intensity activities)
- Minimally supervised
- Long term outlook
- Low resource requirements
 - Low cost (staff, equipment, transport)
 - Brisk walking, exercise to music, exercise bike
- Sustainable
 - Successful, shared benefit,
 - Staff support for participants