Nordic Walking Research

- Gold mine?
  ............Or minefield?
Research Article Sources

- Internet
- NWUK website
Nordic Walking is the Best Exercise in the World for Everyone!
To Investigate the Effects of an Eight Week Nordic Walking Programme on Health Outcomes in Sedentary yet Healthy Adults

Result: Nordic Walking did not significantly enhance health benefits when compared to ordinary walking.
What to look for when assessing Nordic Walking research studies.
1. How long should a Nordic Walking study be?

• 4 wks?
• 8 wks?
• 24 wks?
• 9mths ?
Nordic Walking is an effective physical training modality in COPD. Functional exercise capacity was significantly increased and sustained over a 9 month test period.
2. Size of population studied is important - the smaller the population size in study, the greater any difference found between groups must be in order to be accepted as significant.
3. For accuracy in Nordic Walking research studies look for attention to technique.
Calorie Expenditure During Nordic Walking

T. Church et al
The Cooper Institute,
RQES, vol 73, No.3, pp. 296-300, September 2002
Some individuals increased as much as 46% in oxygen consumption and just about the same in caloric expenditure.

Individuals who poled more intensely had higher oxygen consumption.

There is potential for considerably more, or less, benefit depending on the selection of poling-off intensity.
VO2 was significantly higher (9.1%) in normal NW than in walking but only 5.5% higher than in easy NW. The calorie consumption was also significantly higher (10.0%) in NNW than in W and only slightly higher (4.6%) than in ENW.
To Investigate the Effects of an Eight Week Nordic Walking Programme on Health Outcomes in Sedentary yet Healthy Adults

Result: Nordic Walking did not significantly enhance health benefits when compared to ordinary walking.
• Was eight weeks long enough?

• Said that there were 37 participants. In fact only 27 passed the criteria to be included in the trial.

• Instruction given for first week only but no mention of level of effective technique reached.

• Borg 12-13 RPE scale used but doesn’t say how long for or how work was increased (time, terrain or technique) or if the NW Instructor was Fitness trained.
Health Benefits of Nordic Walking

Anecdotal or Evidence?
Participant Quotes
‘I feel so much more active since I started Nordic Walking’
Effects of regular Nordic Walking training in elderly.

• The performance in a six minute test improved 14%, maximal walking speed 20%, and balance 4%.

• Self-rated health improved 22%, self-rated physical fitness 24% and performance in the physical activities of daily living 30%.
Nordic Walking is 125% more effective in improving gait speed among a rehabilitation population than normal Walking.
Nordic Walking significantly improved functional capacity in the elderly.
‘I had a total knee replacement 18mths ago and as a result of my Nordic Walking my knee feels stronger. I’ve noticed improved strength in my arms and legs’
Walking with poles resulted in substantial increases in muscular endurance (38%), but there was no significant increase in muscular strength.
Lessens impact on hip, knee and foot joints by 26%

Bohne 2002
Using poles decreases impact downhill

BUT

Kleindienst et al 2006
NW shows higher vertical force during landing, lower force during push off.

L. Hansen1, M. Henriksen2, P. Larsen3, T. Alkjaer
Nordic Walking does not reduce the loading of the knee joint
‘I’ve lost 5kg since I started Nordic Walking’
T. Church et al 2002 Cooper Institute, Texas

Field testing of Physiological Responses associated with Nordic Walking

Up to 20% more oxygen burned, 20% more calories burned, 8% higher HR reached
Efficacy of Nordic Walking in Obesity Management

NW activity in obese women allows an increase in exercise intensity without increasing the perception of effort
‘Nordic Walking is the only exercise programme that I’ve stuck to’
Efficacy of Nordic Walking in Obesity Management

Increased adherence to a training program.
Reuter et al 2011

A study of how Nordic Walking can improve the symptoms of depression.

All patients in NW group continued walking after the study.
‘Nordic Walking is much better rehab than the gym’
Improvement in functional status was 14% greater in patients with moderate to severe heart failure assigned to Nordic pole walking versus usual cardiac rehabilitation care.
Collins 2002 and 2004

After 24 wks Nordic Walking training for those with peripheral vascular disease, their exercise tolerance increased, their cardiovascular fitness improved, distance and walking speeds increased. Overall perceived quality of life significantly improved.
Nordic Walking enables a safe increase in exercise intensity and may be a more effective training method than walking without poles in patients with Heart Failure as well as healthy subjects.
‘I love the feeling of being able to walk upright when I use my Nordic Walking poles - it helps me to breathe’
Nordic Walking is an effective physical training modality in COPD. Functional exercise capacity was significantly increased and sustained over a nine month test period. Uncomfortable feelings of breathlessness decreased and remained decreased.
‘I have raised blood pressure but due to Nordic Walking I’ve been able to stop my tablets’
Mikalacki et al coll Antrolpol Sept 2011

Three months pole walking led to significant reduction in resting HR, diastolic and systolic blood pressure.

Knowles Journal of Sport and Health Research 2012

Significant reduction in diastolic pressure after 8 weeks Nordic Walking.
‘Nordic Walking leaves me feeling really good’
Physical Activity of Depressed patients and their motivation to exercise: Nordic Walking in Family Practice

- Numbers with depression significantly decreased following 24 weeks of Nordic Walking

- Mood was significantly elevated and motivation to exercise increased
Levels of anxiety and depressed mood significantly decreased in those with COPD after a programme of NW.

Quality of life significantly improved
Nordic Walking led to significant improvements in perceived aspects of Emotional Quality of Life and mood over time in healthy populations.
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Nordic Walking did not significantly enhance health benefits when compared to ordinary walking.