"Knowledge Dispels Fear"

The Depression Self Help Plan

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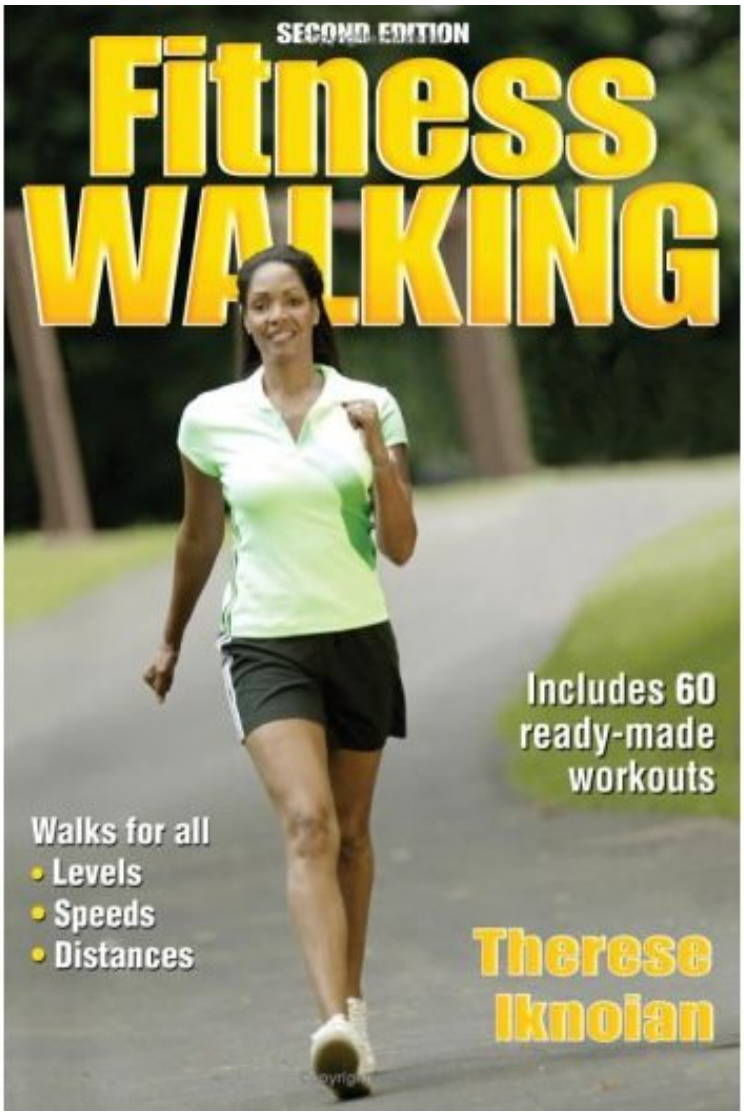
Session (5) Brisk Walking

Caution

The Depression Self-Help Plan is designed as a self-help tool for clinical Depression. It is important that you do not diagnose yourself as suffering depression but see your Doctor for an assessment and diagnosis, because there are some medical conditions whose symptoms can mimic those of depression such as thyroid gland problems, pernicious anaemia etc, and if this is the case then it is vital to get it diagnosed and treated by your doctor. If you have any health problems and/or are taking any form of regular medication, are pregnant, then discuss with your doctor before using the depression self-help techniques outlined in this course. The techniques outlined in this course are designed to be used in conjunction with any treatment from your Doctor, not as an alternative to standard treatment by your doctor. The techniques outlined in this self-help plan, such as relaxation, exercise, etc. may cause a few people on long-term medication to require a reduction to their medication; this should not be done by the individual but by their doctor. Do not practise techniques like relaxation while driving a car, or doing any other activity that needs concentration for safety and do not drive immediately after using a relaxation technique, acupressure or any other technique that makes you drowsy. We also advise that you do not make any life changing decisions such as leaving a job or ending a relationship until you have recovered from your depression, otherwise you may make a mistake that you later regret.

Recommended Reading: Brisk Walking



Iknoian T. (2005) Fitness Walking, Human Kinetics Europe Ltd.

Physical Activity Readiness Questionnaire

A modified version of the *Physical Activity Readiness Questionnaire (PAR-Q)* below was developed by the Canadian British Columbia Ministry of Health.

For most people physical activity should not pose any problem or hazard. *PAR-Q* has been designed to identify the small number of adults for whom physical activity might be inappropriate or those who should have medical advice concerning the type of activity most suitable for them. Read and answer the questions carefully.

YES	NO	
☐	☐	1. Has your doctor ever said you have heart trouble?
☐	☐	2. Do you frequently have pains in your heart or chest?
☐	☐	3. Do you often feel faint or have spells of severe dizziness?
☐	☐	4. Has a doctor ever said your blood pressure was too high?
☐	☐	5. Has your doctor ever told you that you have a bone or joint problem such as arthritis that has been aggravated by exercise, or might be made worse by exercise?
☐	☐	6. Is there a good physical reason not mentioned here why you should not follow an activity program even if you wanted to?
☐	☐	7. Are you over age 65 and not accustomed to vigorous exercise?

If you answered yes to any of the above questions or you are unsure always see your doctor before starting an exercise programme.

Exercise and Depression

> ***"A recent discovery has been that exercise also increases serotonin levels, and so acts as a more natural antidepressant. But physical activity could be even more potent than antidepressants because it has a dual action, by further more increasing the sensitivity of nerve cell receptors to serotonin."***
> (Dr Raj Persaud)

The Allied Dunbar Insurance Fitness Survey on the Nation's exercise habits revealed that only 20% of men and 11% of women take enough exercise. This lack of physical exercise plus other factors, like a poor diet and chronic stress, has been shown to be a factor in making us more vulnerable to suffering a number of health problems, including psychological health problems such as anxiety and depression. A study of 1,500 people found that people who do not exercise have a three times higher risk of developing depression when compared to people who do exercise.

If you are suffering with depression and/or anxiety, exercise may seem the last thing you want to do, but research has shown that people who forced themselves to exercise found it was one of the best things they could do to help lessen their anxiety and depression.

Exercise can help us to recover from a depressive episode. In fact exercise is so potent that research has indicated for mild forms of clinical depression, regular, aerobic exercise has an antidepressant and anti-anxiety effect that can be as therapeutically effective as a course of antidepressant medication or a course of psychotherapy in helping to manage clinical depression.

Regular aerobic exercise should form the backbone of any treatment program for depression. The National Institute Clinical Excellence (NICE) recently sent advice to GPs advising them to recommend exercise rather than antidepressants for mild forms of depression.

Researchers reviewed available data on the role of exercise in combating depression and they found that many studies showed that regular exercise helps to relieve depression. Research published in the British Medical Journal indicated that when a group of hospitalised people suffering clinical depression exercised regularly for nine weeks, their depression scores were significantly lower than a control group who did not exercise. Other research studies indicate that people with clinical depression who continue to exercise regularly, have less chance of a future depressive episode, than people with depression who do not regularly exercise. One study revealed that individuals who exercised had a significant lower risk of a relapse of their depression than those who just took antidepressants on their own without exercising.

People who have recovered from depression and continued to exercise have been found to have a significantly lower risk of a relapse of their depression when compared to people who did not carry on exercising, but it is important to realise that you need to continue exercising on a daily basis, if you stop exercising you quickly loose the protective health benefits.

Types of Exercise

"Exercise may improve health by helping the brain cope better with stress." (The American Psychological Association)

There are two types of exercise:

1. Aerobic
2. Anaerobic

1. Aerobic Exercise

The word aerobic is made up of two Greek words: Aeros meaning air and Bios meaning life. Aerobic exercise is vigorous enough to increase the body's need for oxygen and so air intake and breathing rate increase. Aerobic exercise is done at a pace that allows an adequate supply of oxygen to reach our muscles as we work out. If we can hum to ourselves or carry on a conversation as we work out then we are probably exercising aerobically. This type of exercise can be continued for 20 – 45 minutes without being exhausting.

Some Examples of Aerobic Exercise include:

- Swimming
- Brisk Walking
- Cycling
- Jogging
- Rowing
- Aerobics Classes

2. Anaerobic Exercise

Anaerobic literally means without air or oxygen. A term applied to microbes that can thrive only in the absence of oxygen; but it also refers to the opposite of aerobic exercise, where sustained, intensive exercise (eg sprinting) exceeds the body's capacity to deliver oxygen so that the muscles use energy derived from anaerobic metabolism, resulting in an oxygen deficit which has to be replenished later.

Anaerobic exercise involves intense or explosive spurts of strenuous activity that leaves us gasping for breath. This exercise can only be done for a minute or too at a time, because it depends on limited stores of glycogens (sugars) stored in the muscles that are rapidly depleted resulting in intense muscle fatigue.

Some Examples of Anaerobic Exercise include:

- Weight lifting
- Sprinting

Warm-up, Cool-down

"Walking is the best medicine" (Hippocrates)

Prior to exercise it is very important to spend about ten minutes warming-up your muscles and after the exercise session doing some cool-down exercises. Chapter 20 of *The Relaxation and Stress Reduction Workbook* (details given in Session 3: Managing Stress, Recommended Reading) has diagrams showing these warm up and cool down exercises. The warm up exercises help increase circulation and warm up muscles, the cool down exercises allow blood circulation to return to normal. Always slow down gradually, eg walk more slowly for about five minutes; never stop exercising suddenly.

The following exercises are ideal for warming up. Please note that stretches should be held at the point when mild tension is felt in the muscle, and should be held for 20 to 30 seconds. Under no circumstances should you bounce or lunge when stretching. You should not feel any pain while stretching.

1.Calf

Stand with one leg in front, feet parallel and pointing forwards. Bend the front knee, keeping the back leg straight, pushing the heel into the floor to stretch the calf. Repeat the stretch for the other calf.

2.Quadriceps

Holding on to a wall for support, hold the foot (furthest away from the wall) behind you so that you feel the stretch in the front muscle of the upper half of the leg (quadriceps). Keep the support knee slightly bent, knees together and bottom tucked under. Repeat the stretch for the other leg.

3.Hamstrings

Bend one leg, put the other leg straight out in front. Bending forwards from the hips, lean on to the bent leg. Feel the stretch in the muscle of the back of the upper part of the straight leg (hamstring). Repeat the stretch for the other leg.

4.Inner Thighs

Sitting on the floor, open legs as wide as comfortable. Lean forward from the hips keeping the back straight to feel the gentle stretch in the inner thighs. (www.bupa.co.uk)

Frequency, Intensity and Duration of Exercise

> ***"Exercise is natures best physiological tranquilliser."***
> (Dr Kenneth Cooper, Aerobics Research Institute)

In order to gain maximum benefits from exercise it has to be aerobic, for at least 20 minutes duration, carried out on a regular basis, 3 – 5 days a week is best. To achieve this level and regularity it is best to try to incorporate exercise into your daily life. Any physical activity is useful including gardening, walking to work, using the stairs rather than the lifts or escalators for example.

People often say they don't have the energy to exercise, if fatigue is a problem start slowly and gradually over weeks and months build up your exercise tolerance, if you exercise on a regular basis, this actually increases your energy levels. This is especially true for people suffering post viral fatigue syndrome where low impact aerobic walking built up slowly over a number of weeks shouldn't be a problem but it would be advisable to see your doctor for a health check first.

Many people think that they do enough physical exercise; when asked if they exercise, many say they walk all day in their jobs and that should be enough, but even if a person is on their feet all day, an ordinary, slow walking pace will not supply the benefits needed. While this type of exercise is useful, it is not aerobic. True cardiovascular exercise is performed non-stop for 20-30 minutes reaching your target heart rate range. (Target Heart Rate Range is discussed later in this session)

The Centre for Disease Control says most walkers are not walking far enough, often enough or fast enough to gain the benefits; the exercise has to be aerobic to get full health benefits.

Intensity of Exercise

There is data which shows that high intensity exercise can be stress inducing not stress reducing, so do not go above 60% of your maximum heart rate (Unless you are under the direction of a qualified exercise trainer). Moderate intensity exercise is best, at approximately 50% of maximum heart rate for your age and circumstances. Research has shown that you'll get the same beneficial results by exercising at 50-60% of your maximum heart rate that you would get exercising at an intensity of 80% of your maximum heart rate. We will be discussing how to work out your exercise heart rate later in this session.

Duration of Exercise

Generally you should aim to aerobically exercise for approximately 30 minutes.

Frequency of Exercise

You should aim to exercise at least 5 times per week.

Brisk Walking

> ***"If everyone were to walk briskly, 30 minutes a day, we could cut the incidence of many chronic diseases 30 – 40%."*** (Dr Joanne Mason, Chief of Preventable Medicine, Brigham and Women's Hospital, Harvard University)

Fitness walking at moderate intensity is one of the safest and cheapest exercises we can do to help us, not only manage our stress, but also it has a powerful effect on reducing our risk of a variety of psychological and physical health problems. We do not need to do vast amounts of painful exercise to gain the benefits, indeed if exercise is painful then we are overdoing it. Thirty minutes a day of moderate intensity, brisk walking is all we need.

Brisk walking supplies all the benefits of exercise without the risk of injury that can occur with high impact exercise like jogging. Jogging has been shown to have the risk of causing damage to joints, tendons and backs, because you are hitting the ground at two to three times the force of gravity, whereas walking has far less risk of such injuries.

Most of us can have a tendency to be sedentary and then go to the other extreme by taking up vigorous exercise like squash. It is not advisable to take up vigorous exercise if you have not exercised for some time, instead gently increase your exercise tolerance by completing a walking programme first.

Walking is the most natural exercise we can take, however the walking has to be at aerobic intensity, a simple amble, eg. taking the dog for a walk, is not going to get your heart in the aerobic zone required to get the full benefits of exercise.

Another advantage is that when walking you do not need any specialised, expensive equipment or expensive gym membership; all you need is loose clothing and sensible, low-heeled walking shoes.

Thousands of research studies have revealed that exercise has many numerous beneficial effects for our physical and psychological well being, reducing our risk of developing a wide range of western health problems, such as:

- Heart Disease
- Colds/Flu
- Stress
- Insomnia
- Obesity
- Prostate Cancer
- Gall bladder disease
- Heart Attacks
- Stroke
- Breast Cancer
- Anxiety
- Premenstrual Syndrome
- Glaucoma
- Colon Cancer
- Breast Cancer
- Constipation
- Erectile dysfunction
- High Blood Pressure
- Depression
- Osteoporosis
- Diabetes
- Lung Cancer
- Dementia

One Example of a Brisk Walking Program

The following walking program (see table below), devised by Dr Kenneth Cooper of The Aerobics Research Institute in Texas, is designed for a low level of fitness. It is a progressive 16-week program that entails taking 5 walks per week, gradually increasing your time and the distance you cover.

WEEK	***DISTANCE COVERED IN EACH OF THE WALKS***	***DURATION OF EXERCISE***
Week 1	1 Mile	15 mins
Week 2	1 Mile	14 mins
Week 3	1 Mile	13 mins 45 secs
Week 4	1½ Miles	21 mins 30 secs
Week 5	1½ Miles	21 mins 30 secs
Week 6	1½ Miles	21 mins 30 secs
Week 7	2 Miles	28 mins
Week 8	2 Miles	27 mins 45 secs
Week 9	2 Miles	27 mins 30 secs
Week 10	2 Miles	27 mins 30 secs
Week 11	2½ Miles	35 mins
Week 12	2½ Miles	34 mins 30 secs
Week 13	3 Miles	42 mins
Week 14	3 Miles	42 mins
Week 15	3 Miles	42 mins
Week 16	4 Miles	56 mins

Finding Your Target Heart Rate Range

> ***"Aerobically active individuals have been shown to have a better interplay between their activating, stress response, sympathetic nervous system and their relaxing, restorative, parasympathetic nervous system. This suggests that fit individuals may be less psychologically reactive in stressful situations."*** (JC Quick and JD Quick)

Heart rate provides the best way to monitor your exercise intensity or level of exertion. Research has shown that in order to gain the optimum benefits from exercise your heart rate has to be raised above a certain level and needs to be maintained at that level for 20 minutes. To receive maximum cardiovascular benefits you should walk at an intensity that raises your heart rate to between 50% - 60% of your predicted maximum heart rate. There is a free on-line heart rate calculator which can be found at http://walking.about.com

One of the ways of ensuring that you are exercising hard enough, but not too hard is to use a Heart Rate Monitor Watch. A heart rate monitor watch is similar to an ordinary digital watch. You wear the watch part on your wrist and there is a band that goes around your chest which relays your current heart rate to the watch on your wrist.

Heart Rate Monitors measure your heart rate while you are exercising, which helps to ensure you are walking at the correct aerobic level and not exercising too vigorously; to assist with this some heart rate monitor watches have audio alarms that you can set to be activated if you are under exercising or over exercising. Some Heart Rate Monitors tell you how many calories you've burned and others also show the time. Certain Heart Rate Monitors can be connected to a personal computer so that you can download your exercise data.

You can purchase heart rate monitor watches reasonably cheaply from stores such as Argos. The Finnish company Polar are one of the leading manufacturers of heart rate watches. Their website is www.polar.fi

One Example of a Polar Heart Rate Monitor Watch

You can use the following steps to calculate your Target Heart Rate Range; you are aiming to exercise to between 50% and 60% of your heart rate.

Step 1

First calculate your **Predicted Maximum Heart Rate** in beats per minute by subtracting your age from 220:

220 - _____ (Your age) = _____**(Your Predicted Maximum Heart Rate)**

Example

If you are 45 years old:

220 – 45 = 175 **(Predicted Maximum Heart Rate for a 45 year old)**

Step 2

Next you need to work out **Your Lowest Target Heart Rate** that you need to aim for during exercise, by multiplying your Predicted Maximum Heart Rate from step 1 by 50% (or .5)

_____ **(Your predicted Max. Heart Rate)** X 50% (or .5) =_____ **(Your lowest Target Heart Rate)**

Example

If you are 45 years old and your Predicted Maximum Heart Rate is 175 then:

175 X 50% (or .5) = 87.5 **(Lowest Target Heart Rate for a 45 year old)**

Step 3

Last you need to work out **Your Highest Target Heart Rate** that you can aim for during exercise, by multiplying your Predicted Maximum Heart Rate by 60% (or .6)

_____ **(Your predicted Max. Heart Rate)** X 60% (or .6) =_____ **(Your Highest Target Heart Rate)**

Example

If you are 45 years old and your Predicted Maximum Heart Rate is 175 then:

175 X 60% (or .6) = 105 **(Highest Target Heart Rate for a 45 year old)**

So when you are exercising you are aiming for a heart rate within the range of the two figures you have just worked out in steps 2 and 3. In the example given, if you are 45 years old, you need to aim to get your heart rate between 87.5 and 105 beats per minute during exercise.

Resources Session (5)

Action Plan: Brisk Walking

	Yes	No
▪ Fill in the Par-Q fitness test. If there is no problem with this test then begin the gentle fitness walking programme.	☐	☐
▪ Work out your Target Heart Rate Range and aim at walking at 50% - 60% of your maximum heart rate.	☐	☐
▪ Consider borrowing the recommended book for this session, Fitness Walking.	☐	☐
▪ Start a gentle walking exercise programme and record your efforts in the Brisk Walking Log	☐	☐

Brisk Walking Log

	Date	*Duration*	*Resting Heart Rate*	*Exercise Heart Rate*	*Cool-Down Heart Rate*	*Notes*
1						
2						
3						
4						
5						
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31						

How to use the Log

- First, print this log and hang it in a place where you will see it often.
- Record the date and length of time that you exercised/walked for each exercise session.
- Take your resting heart rate at the beginning of exercise and record.
- Take your exercise heart rate during the exercise session or immediately after exercise.
- Take your cool-down heart rate after you have stopped your exercise and have rested for a few minutes. Make sure it has come down to the pre-exercise level.

(Adapted from The Walking Exercise Log 1998 The Trustees of Indiana University)

Useful Self-Help Books, Websites, Addresses: Brisk Walking

Books

- Iknoian T. (1995) Fitness Walking, Human Kinetics Europe Ltd
- Fenton M, Bassett DR, (2006) Pedometer Walking, Lyons Press
- Fenton M, Fenton L. (2004) Walking through Pregnancy and Beyond, Lyons Press.

Websites

Walking

- http://walking.about.com
- http://www.walking.org
- www.whi.org.uk
- www.ramblers.org.uk
- www.thewalkingsite.com

Heart Rate Monitor Watches

- http://www.polar.fi/index.html

Rebounding

- www.starbounding.com

Aerobic Exercise Equipment

- www.bodycare.co.uk

Free online Target Heart Rate Calculator

- http://exercise.about.com/cs/fitnesstools/l/bl_THR.htm

Addresses

- ***Walk for Health Initiative***

  The WHI Team, The Countryside Agency, John Dower House, Crescent Place, Cheltenham, GL50 3RA, ☎: 01242 533258, Email: whiinfo@countryside.gov.uk
  Web: www.whi.org.uk

- ***Ramblers Association***

  2nd Floor Camelford House, 87-90, Albert Embankment, London, SE1 7TW.
  ☎: 0207 339 8500, Fax: 0207 339 8501, Email: ramblers@ramblers.org.uk
  Web: www.ramblers.org.uk

- ***Sport England***

  3rd Floor Victoria House, Bloomsbury Square, London WC1B 4SE,
  ☎: 08458 508 508, Fax: 020 7383 5740, Email: infor@sportengland.org
  Web: www.sportengland.org

Bibliography and References: Session (5)

"At least five a week: evidence on the impact of physical activity and its relationship to health," (2001) Department of Health Publications.

Babyak J et al "Exercise treatment for major depression: maintenance of therapeutic benefits at 10 months. *Psychosomatic Medicine*, (2000); 62: p633-638 [Pubmed]

Bernaards CM et al "Can strenuous leisure time physical activity prevent psychological complaints in a working population." *Occup Environ Med* (2006) Jan; 63(1): p10-16. [Pubmed]

Blumenthal JA, Babyak MA, Moore KA et al. "Effects of training on older patients with major depression." *Arch. Intern. Med.* (1999); 159: 19-26.

Callaghan P "Exercise: a neglected intervention in mental health care?" *J Psy Ment Health Nurs* (2004) Aug;11 (4): p476-483. [Pubmed]

Dimeo F et al, "Benefits from aerobic exercise in patients with major depression: a pilot study. *Br J Sports Med* (2001) Apr; 35(2): p114-117. [Pubmed]

Galper DI et al, "Inverse Association between physical inactivity and mental health in men and women." *Med Sci Sports Exerc* (2006) Jan; 38(1): p173-178. [Pubmed]

Gournay K. (1995) Stress Management, Assett Books.

Iverson GL, Thordarson DS "Women with low activity are at increased risk for depression" *Psychol Rep* (2005) Feb; 96 (1):p133-40. [Pubmed]

Johnsgard K. (2003) The Exercise Prescription for Depression and Anxiety, Perseus Publishing.

Kirby S, "The positive effect of exercise as a therapy for clinical depression." *Nurs Times* (2005) Mar 29-Apr 4; 101 (13): p28-29. [Pubmed]

Klein MH, Greist JH, Gurman AS. "A comparative outcome study of group psychotherapy vs.exercise treatments for depression." *Int. J. Mental Health* (1985); 13: p148-177.

Lawlor DA, Hopker SW. "The effectiveness of exercise as an intervention in the management of depression: systematic review and meta-regression analysis of randomised controlled trials." *BMJ* (2001); 322: p1-8. [Pubmed]

Martinsen EW. Benefits of exercise for the treatment of depression. *Sports Med.* (1990); 9: p380-389.

Martinsen EW, Medjus A, Sandvik L. Effects of aerobic exercise on depression: a controlled study. *BMJ* (1985); 291: p109. [Pubmed]

Martinsen EW. "The role of aerobic exercise in the treatment of depression." *Stress Med.* (1987); 3: p93-100.

McCann L, Holmes DS. "Influence of aerobic exercise on depression." *J. Pers. Soc. Psy.* 1984; 46: p1142-1147. [Pubmed]

Motl RW et al "Depressive symptoms among older adults: long term reduction after physical activity intervention." *J Behav Med* (2005) Aug; 28 (4): p385-394. [Pubmed]

North TC, McCullagh P, Tran ZV. "Effect of exercise on depression." *Exerc. Sport Sci Rev.* (1990); 18: p379-415. [Pubmed]

Persaud R. (2001) Staying Sane: How to make your mind work for you. Bantam.

Quick JC, Quick JD (1984) Organisational Stress and Preventive Management, McGraw-Hill.

Stanway A. (1987) The Natural Family Doctor, Simon and Schuster.

Weiss LA et al, "Leisure time physical activity in relation to depressive symptoms in the Black Women's Health Study." *Ann Behav Med* (2006) Aug; 32(1): p68-76.