



# Mental Health and Physical Activity Information Pack

‘Partnering to enhance recovery’

May 2006

# Mental Health and Physical Activity Information Pack

This information pack has been developed from the Mental Health and Physical Activity Forum conducted by Kinect Australia in May 2006 <sup>1</sup>. It is based on presentations made by invited speakers at the forum, as well as the growing international evidence base regarding the benefits of promotion of and participation in physical activity, for mental health and wellness.

The Australian Government has developed Physical Activity Recommendations for Adults. It is important to address these recommendations when planning physical activity initiatives throughout Australia. They state:

- 1. Think of movement as an opportunity, not an inconvenience.**
- 2. Be active every day in as many ways as you can.**
- 3. Put together at least 30 minutes of moderate intensity physical activity on most, preferably all, days of the week.**
- 4. If you can, also enjoy some regular, vigorous activity for extra health and fitness.**

A brochure of the guidelines can be downloaded from the following website:

<http://www.health.gov.au/internet/wcms/Publishing.nsf/Content/phd-physical-activity-adults-pdf-cnt.htm>

There is a growing field of evidence of benefit associated with increasing physical activity levels among groups and individuals in the community who experience or are at risk of mental health problems. The strongest evidence is in the area of the relationship between physical activity (measured via fitness level and/ or activity level) and depressive symptoms. A recent study conducted at the Cooper Institute concluded that “relative increases in maximal cardio-respiratory fitness and habitual physical activity are cross-sectionally associated with lower depressive symptomatology and greater emotional well-being.” Further, inactive women exhibited greater depressive symptom severity than those classified as insufficiently active and sufficiently active. Likewise, inactive men exhibited greater depressive symptom severity than those classified as insufficiently active and sufficiently active. <sup>2</sup> A cross-sectional analysis of 1536 adults performed in 1992, found those who reported no physical exercise were 3.15 times more likely to have severe to moderate depression. <sup>3</sup>

There is also much promising research in the effectiveness of exercise as an intervention in the management of depression. A 2002 meta-analysis published in the British Medical Journal concluded: when compared to no treatment, exercise reduced symptoms of depression and in studies relating exercise to cognitive therapy, the effect of exercise was similar. <sup>4</sup> A meta-analysis including 80 studies indicated exercise reduces depression scores relative to comparison groups across a wide range of subjects, from normal adults to those with diagnosed clinical depression. When research was limited to the clinically depressed, similar effectiveness was shown. <sup>5</sup>

Many different forms of physical activity have proven effective; including resistance and cardiovascular training with varying intensities, duration, frequencies and lengths of program. In fact, Craft and Landers <sup>5</sup> found by analysing several varied studies, that “program characteristics such as duration, intensity, frequency and mode of exercise did not moderate

the effect...only the length of program was a significant moderator, with programs 9 weeks or longer being associated with larger reductions in depression." Both resistance and cardiovascular programs of low to high intensity and varied frequencies have shown improvements for those with depressive symptoms.

<sup>1</sup> Mental Health and Physical Activity Forum, May 2006. Full program and presentations available at:

<http://www.vicfit.com.au/vicfit/DocLib/xPub/DocLibAll.asp>

<sup>2</sup> Galper, D., M. H. Trivedi, et al. (2006). "Inverse association between physical inactivity and mental health in men and women." *Med Science Sports Exercise* 38(1): 173- 178

<sup>3</sup> Dunn, A. L., M. H. Trivedi, et al. (2001). "Physical activity dose-response effects on outcomes of depression and anxiety." *Med Sci Sports Exercise* 33(6 Suppl): S587-97; discussion 609-10.

<sup>4</sup> Lawlor, D. A. and S. W. Hopker (2001). "The effectiveness of exercise as an intervention in the management of depression: systematic review and meta-regression analysis of randomised controlled trials." *BMJ* 322(7289): 763-7.

<sup>5</sup> Craft, L. and D. Landers (1998). "The effect of exercise on clinical depression and depression resulting from mental illness; a meta-analysis." *Journal Sport Exercise* 20: 339-357.

## Physical health of people living with mental illness

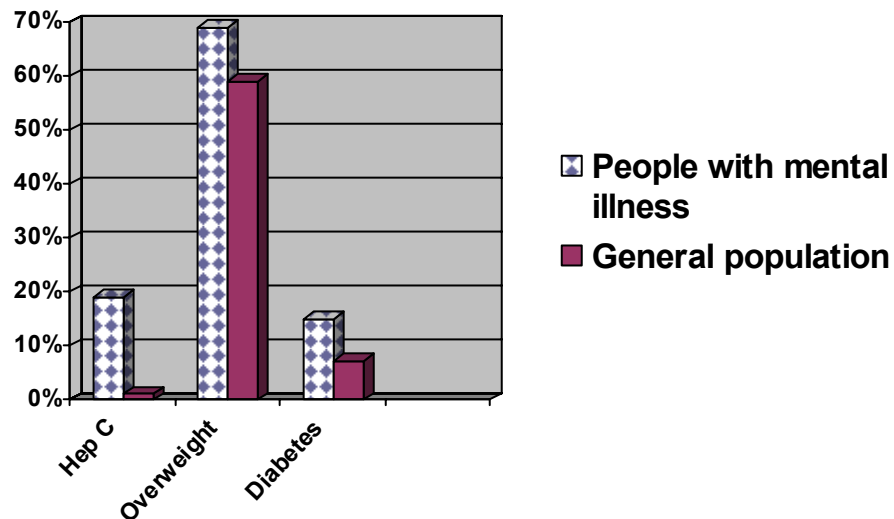
One of the major themes of the forum was the differences in health outcomes of people living with mental illness. The Victorian Population Health Survey 2005 revealed that after adjusting for age and sex those persons most likely to be categorised as experiencing psychological distress were those persons with lower education levels, those unemployed or not in the labour force, those in non-professional occupations, smokers, those with doctor diagnosed high blood pressure, those told by a doctor that they had depression or anxiety, those self-reporting poor health status, those not having private health insurance and those in households having lower income levels. 13.1 per cent of males and 23.3 per cent of females had been told by a doctor that they had depression or anxiety.

A World Federation for Mental Health (2004) report: *The Relationship Between Physical and Mental Health* found that:

**... research, in many countries, has consistently confirmed that psychiatric patients have high rates of physical illness, much of which goes undetected. Such investigations have led to calls for health professionals to be more aware of these findings and for better medical screening and treatment of psychiatric patients. So far, there is no evidence that this is happening, and the excess illness and mortality continue unabated, with people being managed as psychiatric outpatients being nearly twice as likely to die as the general population.**

Brad Wynne, St Vincent's Mental Health Service, explained that the standardised mortality rate is 2.5 times that of the general population; male life expectancy 15 years less, females 6 years less. The following illustrates the relationship between disease and mental illness.





Gerard Reed, of the Mental Illness Fellowship of Victoria, indicated that hospitalisation rates were considerably lower than for the general population for serious illnesses. He added:

- 24% of people living with a psychotic illness in Australia live in marginal housing (ie homeless, crisis shelter, rooming house, hostel, rented hotel room)
- 80% of people with a mental illness in Australia are unemployed
- 47% do not complete secondary education

*(National Survey of Mental Health and Wellbeing Bulletin 5, National Mental Health Strategy 2002)*

Brad addressed some factors as to why physical illness is so poor in this population.

- Mental illness itself
- Health services organisation
- Unhealthy lifestyle behaviours
- Medications
- Segregation of primary health and mental health care sites
- Lack of counselling
- Poverty / lack of basic facilities
- Treatment for the mental illness

Brad Wynne added it is important to address these issues as:

- Clients deserve the best health service we can provide
- It will improve quality (and potentially quantity) of life
- We want our treatment to make a difference (e.g. antipsychotics and cardiovascular death /suicide trade off)
- It may save the health system money

St. Vincent's is a model for addressing these issues with their clients. Their current strategic plan has physical health as a focus area. They address physical health issues via the platform of:

- Make it important
- Identify the problem
- Seize the opportunity
- Prevent/ remediate

For example, in addressing diabetes they:

- Make it important – 20-30% of people with schizophrenia have Diabetes /Impaired Glucose Tolerance
- Identify the problem- genetics, weight and drugs are significant risk factors
- Seize the opportunity- screen all with schizophrenia
- Prevent/remediate- physical activity, change the prescribed medication

Similarly, in addressing obesity, they:

- Make it important – Focus clinical care on awareness of this increasing problem
- Identify the problem- prescribed medication and ‘negative symptoms’ are significant risk factors
- Seize the opportunity- Clinical services need to engage and educate clients before the weight gain
- Prevent/remediate- education, physical activity focus, change the medication

St. Vincent’s commitment to their clients’ physical health include: a regular review of physical health, improved access to appropriate interventions, work to engage clients in health promotion activity according to their strengths / needs, and an aim to strengthen liaison and linking with Primary Care Providers (e.g. GPs), Community-based Organisations providing physical activity and leisure programs.

Similarly, The Mental Illness Fellowship works to address the whole person in addressing the physical health of their clients. He explained that stigma is still a huge barrier to people with mental illness having their physical health needs met. They have a holistic approach to treatment. Gerard Reed explained that this should be part of a whole treatment plan. You need to look at the person as a whole and to look at existing support networks, including (and especially) family where there is one. In addition there is a need to integrate services among service providers, ie share Individual/Personal Support Plans.

Some of their model programs include the Mind Body Life Program, A Healthy Lifestyle program by Eli Lilly. This program consists of:

- Healthy diet (healthy choices)
- Exercise
- Group based, facilitated by key worker or a participant
- Weekly weigh in, meeting and physical activity
- No end date

The Clean Air Program in Hume which is a smoking - harm minimization, rather than quitting, program. This includes: smoking spaces not as conducive and education around the harms of smoking.

For more information about St. Vincent’s and the Mental Illness Fellowship visit:

<http://www.mifellowship.org/>

<http://www.svhm.org.au/infoabout/departments/MentalHealth2005/home.htm>

## Physical Activity and Mental Health Resources

"We now have evidence to support the claim that exercise is related to positive mental health as indicated by relief in symptoms of depression and anxiety."

Daniel M. Landers  
Arizona State University

The main theme of the forum was the use of physical activity as a treatment and preventative measure for mild to moderate depression and other mental health issues. Below are some key resources in this area to learn more:

### The Influence of Exercise on Mental Health

An excellent overview article, by Daniel M. Landers, is available from (U.S.) President's Council on Physical Fitness and Sports. This brief review article looks at current research in the field and gives an overview of the findings in relation to anxiety reduction following exercise and other direct mental health benefits of exercise.

View the full article:

<http://www.fitness.gov/mentalhealth.htm>

### Integrating Physical Activity Into Mental Health Services for Persons With Serious Mental Illness

Caroline R. Richardson, M.D., et al. *Psychiatric Serv* 56:324-331, March 2005

From the abstract:

This article reviews evidence supporting the need for interventions to promote physical activity among persons with serious mental illness. Principles of designing effective physical activity interventions are discussed along with ways to adapt such interventions for this population. Mental health service providers can provide effective, evidence-based physical activity interventions for individuals with serious mental illness.

Topics include: an overview of the mental and physical health benefits of physical activity, the epidemiology of physical activity and serious mental illness, integrating activity interventions into psychiatric services, limitations of current research and future directions.

Full text available from

<http://ps.psychiatryonline.org/cgi/content/full/56/3/324>

### The influence of physical activity on mental well-being

Fox K.R. *Public Health Nutrition*, Volume 2, Number 3A, 1999, pp. 411-418(8).

The purpose of this paper is to a) provide an updated view of this literature within the context of public health promotion and b) investigate evidence for physical activity and dietary interactions affecting mental well-being.

Full text available:

<http://www.ingentaconnect.com/content/cabi/phn/1999/00000002/0000003a/art00016>

## **Exercise to improve self-esteem in children and young people (Cochrane Review)**

Ekeland E, Heian F, Hagen KB, Abbott J, Nordheim L. The Cochrane Database of Systematic Reviews 2004, Issue 1. Art. No.: CD003683.pub2. DOI: 10.1002/14651858. CD003683.pub2.

To determine if exercise alone or exercise as part of a comprehensive intervention can improve self-esteem among children and young people, Cochrane reviewers systematically investigated published research. Eight studies were included in the metaanalysis, and overall the results were heterogeneous. Only four provided data sufficient to calculate overall effects, and the results indicated a moderate short-term difference in self-esteem in favour of the intervention. Authors concluded that exercise was effective in improving self esteem, and due to its lack of negative effects, should be promoted.

Full text available from:

<http://www.mrw.interscience.wiley.com/cochrane/clsysrev/articles/CD003683/frame.html>

## **Depression and Exercise**

From the Better Health Channel and beyondblue

Written for the consumer, this page explains that regular exercise can be an effective way to treat some forms of depression. Physical activity alters brain chemistry and leads to feelings of wellbeing. Exercise can also be an effective treatment for anxiety. Some research studies indicate that regular exercise may be as effective as other treatments like medication to relieve mild to moderate depression. Includes background information and suggestions.

[http://www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/Depression\\_and\\_exercise?OpenDocument](http://www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/Depression_and_exercise?OpenDocument)

Also from beyondblue, a similar fact sheet for consumers, including more tips, a list of enjoyable activities and a Worksheet for planning activities and managing the sleep- wake cycle.

[http://www.beyondblue.org.au/index.aspx?link\\_id=7.246&tmp=FileDownload&fid=328](http://www.beyondblue.org.au/index.aspx?link_id=7.246&tmp=FileDownload&fid=328)

## **Exercise for Depression**

From the Mayo Clinic

Written for the consumer, this page provides an overview of how exercise helps depression and anxiety including benefits and tips for those with depression.

Available from MayoClinic.com

<http://www.mayoclinic.com/health/depression-and-exercise/MH00043>

## **Active Inform:**

### **Mental Health- The Case for Exercise in Prevention and Treatment**

<http://www.vicfit.com.au/fitness/DocLib/Pub/DocLibDetail.asp?IngDocLibID=235>

## Effect of exercise on mood

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### What do we know?

Well documented (well over 100 studies have been conducted) that a single session of exercise can result in reasonably large mood benefits

#### 1. What type of mood states?

Increases in <u>positive</u> mood states such as	Decreases in <u>negative</u> mood states
Positive well-being (strong, positive) Vigor, more refreshed, energetic Elation, feeling upbeat, happy, enthusiastic Peaceful; calm, relaxed	Psychological distress tension anxiety confusion Anger (less consistent finding)

#### 2. What forms of exercise?

Evidence is strongest for aerobic activities such as walking, running, cycling, swimming, and exercise classes – rather than anaerobic activities (such as weight training)

#### 3. How long do you need to exercise?

##### Mood after exercise-

some debate about this in the literature – originally it was thought that you need to exercise for at least 20-30 minutes to experience these mood improvements – however recent research by Ekkekakis and colleagues (2000) suggests that a 10-15 minute walk can result in mood improvements.

##### Mood during exercise

Once again some debate, but it seem like that you need to exercise for longer to actually feel better during the activity. Research we conducted (O'Halloran et al., 2004), which was published in the *International Journal of Sport Psychology*, suggests that most mood improvements aren't detectable until 25-40 minutes of running – where people will feel less tense, more clearheaded, more elated – less depressed, and more energetic. Another interesting finding was that some mood benefits may be confined to a period during exercise (increased energy and clarity of thought).

#### 4. Intensity of activity

Some debate in the literature – most widely held view is that **moderate intensity activity is the best bet for improving mood** (e.g. Berger, 1996, Berger & Motl, 2000). Some improvements following **low intensity activities** have been reported however reports of improvements are less consistent. **High intensity exercise** has been found to lead to deterioration in mood in some studies and a small improvement in others.

## **5. Are these benefits open to everyone. Who is most likely to experience the benefits?**

Most evidence has been obtained from relatively young, healthy and active studies but evidence is emerging that older people, even with chronic illnesses can experience mood benefits. For example a recent study we conducted in a group of persons with type 2 diabetes found that 20 and 40 minute sessions of group walking both resulted in improvements in positive well-being.

Research suggests that:

- **men and women** are equally likely to experience mood benefits
- **how you feel prior to exercise is important**: people who begin exercise feeling less positive (mood disturbed) are likely to experience the largest improvements
- **Fitness levels**: no reliable evidence that fitter people will be more likely to experience mood benefits

### **What we don't know?** (what has yet to be determined)

**more research needs to be conducted regarding issues such as:**

- **which particular activities produce the strongest change?** – e.g. is running superior to walking? etc
- **how long do these benefits persist?** – most studies have assessed mood within the first 10-20 minutes after exercise so little is known about how long the benefits last – however one study has suggested that benefits could persist for up to 3 hours (Dyer & Crouch, 1987) and another found that mood benefits could persist for up to 24 hours (Maroulakis & Zervas, 1993)

### **Summary**

3 key points regarding mood an exercise

1. If you want to feel better **after exercise** –
  - a 10-15 minute walk is sufficient
2. if you want to feel better **during activity**
  - exercise for longer periods – you are better off walking for 45-minutes than for 20 minutes.
3. **You will experience the largest improvements on the days that you feel the least positive prior to exercising**

### **References:**

- Berger, B. G. (1996). Psychological benefits of an active lifestyle: What we know and what we need to know. *American Academy of Kinesiology and Physical Education*, 48, 330-353.
- Berger, B. G., & Motl, R. W. (2000). Exercise and mood: A selective review and synthesis of research employing the Profile of Mood States. *Journal of Applied Sport Psychology*, 12, 69-92.
- Dyer, J. B., & Crouch, J. G. (1987). Effects of running on moods: A time series study. *Perceptual and Motor Skills*, 64, 783-789.
- Ekkekakis, P., Hall, E. E., VanLanduyt, L. M., & Petruzzello, S. J. (2000). Walking in (affective) circles: Can short walks enhance affect? *Journal of Behavioral Medicine*, 23(3), 245-275.
- Maroulakis, E., & Zervas, Y. (1993). Effects of aerobic exercise on mood of adult women. *Perceptual and Motor Skills*, 76, 795-801.
- O'Halloran, P. D., Murphy G., & Webster K. E. (2004). Mood during a 60-minute treadmill run: Timing and type of mood change. *International Journal of Sport Psychology*, 35(4), 309-327.

## **Over-Exercise, Body Image and Eating Disorders - How Can the Fitness Industry Help?**

Another theme of the forum was on eating disorders, their relation to mental health and what the fitness industry can do to help. Anorexia is the the 3rd most common disease in Australian females aged 15-24 years. The “all cause” standardised mortality ratio for anorexia is estimated to be three times higher than any other psychiatric illness (Nielsen, 2001). Sport and exercise do not cause ED but some aspects of the sport environment can increase the risk of ED. A number of studies have reported higher frequency of eating problems in athletes than non-athletes that emphasize leanness and low body weight.

ED cause significant damage psychologically and physically. Prevention and early intervention are key. Earlier treatment results in fewer health risks.

Fitness professionals are positioned to: provide accurate information, promote protective factors & more sustainable approaches to physical activity, and reduce risk factors. They may have regular contact with clients and a duty of care.

Can exercise help those with or at risk of developing eating disorders?

Individuals suffering from poor body image and eating disorders often engage in unhealthy levels of over-exercise as a means of weight management; however exercise may also play a role in recovery. Studies show that a person who appreciates their body for what it can do, rather than what it looks, like tends to have higher body image satisfaction. Some research indicates that patients who engaged in a supervised exercise program during recovery rated their quality of life as significantly better than those denied the opportunity. Individuals recovering from Anorexia Nervosa may benefit from a strength building program. Weights can slowly be introduced, with increasing goals. As the person becomes physically stronger through nutrition greater weights will be achieved. Relaxation and Yoga may be useful in managing symptoms such as anxiety associated with the ED. Yoga has been used in eating disorder inpatient units. It is reported that patients who engage in yoga are less compelled to engage in secretive exercise in the bed or in the shower. It is believed yoga may support the reestablishment of the connection between mind and body.

The Eating Disorders Foundation of Victoria DELIVER Project has developed resources and training to assist both coaches and fitness leaders to:

- Better detect people who may be at risk of, or experiencing an eating disorder.
- More confidently and competently intervene at a non clinical level, non treating level with people who they have identified as at risk of, or experiencing an eating disorder.
- Implement effective health promotion strategies to reduce the incidence of disordered eating.

The Fitness Professional Resource Contains information on:

- creating a supportive fitness environment
- identifying when a problem is a problem
- what to say when approaching someone at risk
- the roles of different professionals within the fitness industry
- supporting clients that return to exercise

Their fitness industry training, accredited by both Kinect (VICFIT) and Fitness Victoria

- Explores instructors own values around body image, dieting/over exercise and weight.
- Explores causes of eating disorders generally and in relation to sport.
- Explores concepts of “normal eating” and possible negative consequences of the fad dieting culture.
- Reviews IOC recommendations regarding the female athlete triad and weight management.
- Practical skills are established in detection and appropriate responses through role playing and interactive activity.

Learn more about the resources and training from:

EDFV

Helpline: 98850318/ 1300 550 236

[www.eatingdisorders.org.au](http://www.eatingdisorders.org.au)