Physical Activity and Psychological Benefits:  
A Position Statement

International Society of Sport Psychology (ISSP)

The 20th century has seen a substantial reduction in the frequency and intensity of physical activity of human beings throughout their life span. This has had a significant impact on individuals and society. With concern for this matter, the International Federation of Sport Medicine (FIMS) has issued a position statement (June 11, 1989) titled “Physical Exercise—An Important Factor for Health.” The statement clarifies the relationship between lack of physical exercise and cardiovascular morbidity and mortality. The statement also postulates the prevention of coronary artery disease and the reduction of all-cause mortality when exercise constitutes an integral part of work and leisure activities.

It is appropriate to complete this statement by clarifying the psychological benefits of physical activity, and the International Society of Sport Psychology (ISSP) has prepared this position statement accordingly.

Studies have shown that exercise brings about both short- and long-term psychological enhancement and mental well-being (Dishman, 1985, 1986; Morgan & Goldston, 1987). Physical activity has been found to have a positive causal effect on self-esteem in adults (Sonstroem, 1984). Aerobic activity can reduce anxiety, depression, tension, and stress, and can increase vigor and clear-mindedness (Bahrke & Morgan, 1978; Berger, 1984; Blumenthal, Williams, Needels, & Wallace, 1982; Dishman, 1985; Morgan, 1979; Raglin & Morgan, 1987; Wilson, Berger, & Bird, 1981). From the clinical perspective, there is evidence that exercise can have a beneficial effect on hypertension, osteoporosis, adult-onset diabetes, and some psychiatric disorders (Powell, 1988; Powell, Spain, Christenson, & Mollenkamp, 1986; Seefeldt, 1986).

It is estimated that as many as 25% of the population suffers from mild to moderate depression, anxiety, or other emotional disorders. Some cope with these disorders individually, without professional assistance. Physical activity can be a promising aid for such people (Brown, 1988), as physical inactivity may be associated with symptoms of depression (Farmer et al., 1988).

Studies on depressed patients have revealed that aerobic exercises are as effective as different forms of psychotherapy, and that the exercises have had an antidepressive effect on patients with mild to moderate forms of depression

Request reprints from Dr. Robert N. Singer, President of ISSP, 305 Florida Gymnasium, University of Florida, Gainesville, FL 32611.
(Dunn & Dishman, in press; Martinsen, 1987, 1990; North, McCullagh, & Vn Tran, 1990). Applying the meta-analysis technique, North et al. (1990) found that exercise activity is more beneficial than leisure activity for all varieties of depressive disorders.

Studies on the effectiveness of anaerobic exercise on depressed patients are quite limited. However, several studies show some improvement similar to that obtained following aerobic exercises (Doyne et al., 1987; Dunn & Dishman, in press; Martinsen, Hoffort, & Solberg, 1989). Anaerobic exercise can lead to better results than aerobic exercise (Dunn & Dishman, in press; North et al., 1990). None of these studies was undertaken with patients with severe depressive disorders, although clinical experience indicates there is limited value in exercise intervention for such persons (Martinsen, 1990).

Swimmers have been observed to be significantly less tense, depressed, angry, confused, and anxious after swimming (Berger & Owen, 1983). For men, weight training with free weights is associated with enhanced self-concept (Tucker, 1982, 1984). Exercise has helped yoga participants to be less anxious, tense, depressed, angry, and confused (Berger & Owen, 1983, 1988; Morgan, 1979), while fencing can increase vigor. Tension, depression, anger, fatigue, and confusion have all been shown to decrease following physical exercise, while vigor increases (Morgan, 1980).

Chronic exercise can have a positive effect on mood state and may decrease anxiety in normal subjects (Brown, 1988). But excessive chronic exercise may lead to fatigue, anxiety, and depression (Dishman, 1988). It also appears that addictive involvement in exercise can lead to behavior problems at home or work, physical injury, or feelings of irritability when the obsessive exerciser is forced to stop exercising (Dishman, 1985).

Involvement in physical activity can enhance well-being in the elderly (Netz, Tenenbaum, & Sagiv, 1988) and have a positive effect on the grade scores of students in primary grades (Shephard et al., 1989). The psychological benefits of physical activity and fitness in the work place are well documented in the literature. Based on extensive research, Cox, Gotts, Boot, and Kerr (1988) have concluded that those in industrial management believe a healthy work force is also a more satisfied and productive work force. Fitness programs can promote staff contact across levels, aid communication, and develop cohesiveness in a work team.

Individual psychological benefits of physical activity are many: improved self-image and well-being; increased self-confidence and awareness; positive changes in mood; relief of tension, depression, and anxiety; relief of premenstrual tension; increased mental well-being, alertness, and clear thinking; increased energy and ability to cope; and increased enjoyment of exercise and social contacts. Rosenfeld, Tenenbaum, Ruskin, and Halfon (1989) report that a physical fitness program can lessen feelings of emotional and physical burnout and increase feelings of self-efficiency at work.

Moderate- to high-intensity aerobic exercise reduces state anxiety, muscle tension, and blood pressure for 2 to 5 hours after the activity. For example, the meta-analysis reported by Petruzzello, Landers, Hatfield, Kubitz, and Salazar (1991) supported the idea that aerobic exercise is associated with reduced anxiety. On the other hand, low-intensity and short-duration exercise has not been shown to reduce state anxiety (Dishman, 1988). Crews and Landers (1987) conclude...
that persons who are aerobically fit have a reduced response to psychosocial stress, and this is more marked after involvement in long-term exercise compared to acute bouts of activity. Stephens (1988) has found a positive relationship between level of physical activity and mental health.

The ISSP encourages all persons to participate in vigorous physical activity on a regular basis. It is recommended that they engage in more than one activity, challenging both aerobic and anaerobic capacities. Noncompetitive activities are preferred. When competition is engaged in, however, it should be free of aggression and nonethical conduct. The physical activities chosen should be pleasing and satisfying to the individuals (Berger & Owen, 1988), as enjoyment is related to exercise adherence (Berger, 1987; Wankel & Kreisel, 1985).

DeVries (1981) has recommended that in order to gain psychological benefits from physical activity, persons should engage in low-intensity exercise as reflected by 30 to 60% of the difference between resting and maximal heart rate values. Although 20 to 30 minutes of exercise may be sufficient for reducing stress (Berger, 1986; Berger & Owen, 1983), 60 minutes may provide even more psychological benefit (Mandell, 1979). According to the American College of Sports Medicine, a duration of 20 to 30 minutes at least three times a week of 60 to 90% of age-estimated heart rate maximum may promote psychological benefits. However, other recreational activities such as ball games, aquatics, and the like can be psychologically advantageous as well.

In summary, considering the consensus statement of the American National Institute of Mental Health (Morgan & Goldston, 1987) and the research reviewed herein, the potential psychological benefits of regular vigorous physical activity are as follows:

1. Exercise can help reduce state anxiety.
2. Exercise can help decrease the level of mild to moderate depression.
3. Long-term exercise can help reduce neuroticism and anxiety.
4. Exercise may be an adjunct to the professional treatment of severe depression.
5. Exercise can help reduce various kinds of stress.
6. Exercise can have beneficial emotional effects across all ages for both sexes.

References


