DOCUMENT RESUME

ED 303 713 CG 021 410

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TITLE Socio-Cultural Influences in Eating Disorders: Focus on Sports/Fitness Program.
PUB DATE Oct 88
NOTE 34p.; Paper presented at the Annual Meeting of the National Conference on Eating Disorders (7th, Columbus, OH, October 5-7, 1988).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Anorexia Nervosa; *Athletics; *Bulimia; Cultural Influences; Foreign Countries; *Physical Fitness; Social Influences; *Sociocultural Patterns
IDENTIFIERS Canada

ABSTRACT

This report notes that eating disorders are frequently described as a diet and fitness program gone wild. It outlines and describes five sociocultural influences which have been identified for eating disorders: (1) emphasis on thinness; (2) glorification of youth; (3) changing roles of women; (4) emphasis on fitness and sport programs; and (5) the media. Major studies conducted in the United States and Canada relating eating disorders and sports/fitness activity are thoroughly reviewed and an agenda is presented for moving sports/fitness from part of the problem to part of the solution for eating disorders. The overrepresentation of eating disorders among athletes who must conform to strict weight restrictions in order to perform is discussed and well-known female athletes who have suffered from eating disorders are identified. Anorexia among men is also described. Several tables are included which provide information to help fitness instructors and athletic coaches distinguish between features of the normal athlete/fitness participant and the athlete/exercise anorexic/bulimic. Danger signs of eating disorders are listed and features shared by both normal and eating-disordered athletes are given. The role of the media in promoting a desire for thinness is discussed and issues of dissatisfaction with body weight and body image distortion are addressed. (NB)

SOCIO-CULTURAL INFLUENCES IN EATING DISORDERS

FOCUS ON SPORTS/FITNESS PROGRAM

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ABSTRACT

Socio-cultural influences in eating disorders - focus on Sports/Fitness program

Eating disorders are frequently described as a diet and fitness program gone wild.

This article outlines and describes the five socio-cultural influences which have been identified for eating disorders:

1. emphasis on thinness
2. glorification of youth
3. changing roles of women
4. emphasis on fitness and sport programs
5. media

Major studies conducted in the United States and Canada relating eating disorders and sports/fitness activity are thoroughly reviewed.

An agenda is presented for moving sports/fitness from part of the problem to part of the solution for eating disorders.

PREDISPOSING, PRECIPITATING, PERPETUATING, PROFESSIONAL HELP, AND PREVENTION FACTORS OF EATING DISORDERS

Eating disorders are often described as a diet and fitness program gone wild. Eating disordered individuals start a diet like anyone else, but for some unknown reason the eating disordered individual is driven to further weight loss, even to the point of emaciation. Similarly, what starts out as a moderate healthy fitness program ends up as frenzied compulsive exercise which dominates the person's life. The diet and fitness program which starts out as a solution to stress problems of life, in turn becomes the problem.

Certain groups are more prone than others to become involved in the syndrome and habit of anorexia nervosa or bulimia. Eating disorders are frequently referred to as an occupational hazard for models, dancers, gymnasts, figure skaters, marathon runner, swimmers, wrestlers and jockeys. Requests for assistance from fitness management professionals from throughout North America suggest that certain predisposed individuals in the fitness community are also at high risk.

David Garner, at the University of Windsor BANA-Iona College Conference (1984) listed five socio-cultural influences which affect eating disorders:

1. pressure to be thin
2. glorification of youth
3. the changing roles of females
4. the sport and fitness craze
5. media image and marketing of the idealized female.

1. Pressure to Be Thin

Down through the centuries the ample mature figure as characterized in Rueben's paintings has been favoured. Even during this current century, role models such as Betty Grable in the 40's, Elizabeth Taylor in the 50's and Marilyn Monroe in the 60's reinforced this ideal. In 1966, however, Twiggy arrived from England, and from that day on the slight, thin figure has been the ideal as represented in the fashion industry. Twiggy surpassed Elizabeth Taylor in 1966 as the most attractive woman in the world at the London Waxworks.

The Duchess of Windsor's dictum that "You can't be too thin or too rich," with the emphasis on not being too thin is currently in vogue. According to today's standards, if you are thin you are more likely to be considered attractive. The Manahattan studies conducted in elementary schools in New York City in the 1970's showed that children matched words like "skilled," "humorous," "appealing," "knowledgeable," and "wealthy," with thin females and matched words better left unsaid with overweight females. Two Toronto doctors have done a study which looked at Playboy centrefolds and Miss America contestants from 1960 to 1980 (Garner and Garfinkel, 1983). Over this period the contestant group in general became thinner and the

winners were the thinnest of the thin. During the same period biological studies have shown that our North American population is becoming bigger, heavier and stronger. The social trend is working counter to the biological trend, a disastrous combination!

The pressures to be slim and to diet contribute to the expression of eating disorders among the general population. But you will find it more common in subcultures in which there are intense pressures to maintain a low body weight, i.e., models, dancers, gymnasts, figure skaters, marathon runners, swimmers, rowers, jockeys and wrestlers. Studies at the Toronto General Hospital by Dr. Paul Garfinkel and Dr. David Garner have found cases of anorexia nervosa and bulimia overrepresented in groups of dancers. They found that seven percent were clinically anorexic and thirty-five percent were involved in bulimic binge and purge activity. Similarly, those involved in certain sport or fitness activities experience pressures to maintain a thin shape, not so much to please themselves but to please those who dictate the rules. They begin to believe that becoming thinner and losing weight is a concrete mechanism for measuring one's self worth. Michael Lavine, medical health officer at Kenyon College, reported at the 1984 Conference of the National Anorexic Aid Society in Columbus, Ohio, that "wrestlers, runners, swimmers and even cheerleaders put their athletic scholarships at risk if they do not measure up to artifically low and unhealthy weight standards dictated by coaches."

2. Glorification of Youth

We have little tolerance for aging, particularly among females. The prepubescent shape -- the androgenous look -- is the unhealthy ideal. Beauty and sensuality are related to youth. Men are told that "they are more distinguished as they get older -- women are told "they are getting older." AS the saying in the ads go "It's not only how good you look, but how long you look good!" Therefore, women inhibit any signs of aging by using different products that are on the market. You can change the colour of your eyes, implant new nails and teeth, change the configuration of your body through reduction or surgery (tummy tucks, posterior trimming, etc.). A whole cosmetic, pharmacological and pseudomedical industry has grown up around glorification of youth.

3. The Changing Roles of Women

Lees Blanchard, Canadian Secretary of State for Women's Issues, in addressing the Fitness Leaders Seminar in Alliston, Ontario (Spring, 1986), pointed out that the feminist movement began in 1964. It has opened up great opportunities; however, as with any social movement, there will be casualties. Young women today have so many choices -- there is less tolerance for assuming traditional roles. They are expected to achieve in areas outside the home. With so many choices they become overwhelmed by the vast potential opportunities and doubt their ability to make the right choice. Whatever they do choose as a career, they are expected to mix with being a super housewife, super career woman, and a super mother. They are expected

to "do it all" and do it all in a Size 5 dress. There is often contradictory pressure on a women to be sophisticated and successful while continuing to be fashionable and slim. Like the Anjenou lady they are expected to

get the kids to school on time,
be at the office by nine,
bring home the bacon,
cook it up in a pan,
and never let her husband forget he's a man.

My wife says, "The Anjenou lady must be on drugs!"

4. Emphasis on Fitness

The marketing of fitness/sport as elitist, slim down, shape up activity is a factor precipitating eating disorders. Fitness/sport is not an unmixed blessing and, as in all things, moderation should be the motto.

Today, one is made to feel guilty if they are not doing aerobics, playing tennis or racquetball, or running a marathon. They are expected to live up to fitness/sport standards. For women fitness and exercise is related to weight control and development of a curveless body shape. Men pursue fitness to attain certain health benefits -- a better cardiovascular system; women pursue fitness to lose weight. A Canada Fitness survey in 1981 illustrated this, since only thirty-one percent of the men pursued fitness in relation to weight; while over fifty percent of women pursued fitness to lose weight. Recent Metropolitan Life Insurance charts show that while twenty-five percent of our North American population is overweight; thirty-five percent is underweight. As pointed out by many medical authorities and recently reinforced by a research study in Scotland (Vogue, Sept., 1983: 706) being underweight

is an equal health hazard (and in many instances a more severe health hazard) than being overweight. Garner (Ottawa, 1984) in his Cahper presentation, was highly critical of Participaction and the fitness industry for associating weight loss and health, and marketing fitness and sport covertly and overtly as a way to lose weight.

Garner also reported studies assessing the relevance of competitiveness in terms of eating disorders. He reported the results of a study comparing dance students and music students from high expectation settings. The EAT (Eating Attitude Test) was administered and showed a percentage deviation from average body weight of -17.9 for dance students and only -6.3 for music students (Garner, 1983). In a further analysis looking at the prevalence of anorexia nervosa and symptoms of anorexia nervosa, the total dance group was further subdivided and it was found that those in the more competitive setting were -16.8% deviant from average body weight, while those in a less competitive setting were -8.6 from normal body weight. The obvious message here is that the degree of competitiveness bears a direct relationship with the degree of severity of eating disorders, and further that women involved in activities such as dance (and it might be added, fitness programs) which carry with them an expectation of slimness and also place physical demands upon the participants, place the individual much more at risk than competitive settings such as university and music students encounter (-3.7 deviation from average body weight) or even modelling students (-11.9%).

Other Canadian professionals who treat eating disorders have expressed similar concerns regarding the association between eating disorders and fitness or sport programs. Dr. Pierre Leichner, formerly of Winnipeg and currently at Montreal General Hospital, writing in the ANAB Newsletter (June, 1985) listed case studies of a sixteen-year-old female volleyball player who lost twenty-five pounds unnecessarily over a period of two months, and a thirty-seven-year-old jogger who is increasingly preoccupied with food and displayed an inability to stop losing weight. Patricia Perry, MSN, Director of the Eating Disorders Clinic, Inc. of Toronto, questions the marketing of fitness programs on a lose weight basis, and expresses concern regarding the overrepresentation of figure skaters, runners, gymnasts and swimmers in her treatment population (BANA Conference, 1985).

Researchers at the University of Windsor SIR/CAR-BANA have set up a task force and over the past three years have been assessing the association between eating disorders and selected children and youth activities (dance, figure skating, gymnastics, swimming, track and field, wrestling and fitness programs). Subjects in the study were tested physiologically, psychologically, socially and on nutrition and diet utilizing a battery of tests including the Eating Disorder Inventory (Garner and Olmstead, 1983). One pool of subjects was drawn from Southwestern Ontario children and youth, and the other were subjects involved in the annual BANA-Can Am Summer Camp for Young People with Eating Disorders. Preliminary results show that involvement in sport or fitness programs can be a factor for or against

the development of eating disorders, depending upon the way in which the program is presented. If the program is presented in an elitist, perfectionist model, it is likely that the vulnerable child or youth may experience the activity as a precipitating factor in the development of eating disorders. On the other hand, if the activity or sport is presented in a moderate way stressing the generic derivation of sport (French desporte -- to get away from work), through such things as cooperative games, health/fitness with an emphasis on the input/output relationship between food as fuel and the demands of a physically active life, dance and art as a means of non-verbal expression, music and drama as verbal means of stress management and coping techniques, such programs can provide excellent therapy in the treatment of eating disorders.

Similar results are emerging from studies in the United States, most notably:

1. M. Crago et al. (1985) "Height and Weight Ratios Among Females Athletes: Are College Athletics the Precursors to an Anorexic Syndrome?" conducted at the University of Arizona.
2. Sharon Guthrie (in progress) "The Incidence and Development of Eating Disorders Within an Selected Intercollegiate Athletic Population," being conducted at Ohio State University.
3. Mallick, et al. (1984) and Kostar (1983) reported in Sharon Guthrie and focusing on, respectively, (1) adolescent female athletes in terms of psychological traits similar to individuals with eating disorders in relation to irregular menstrual

periods, (2) weight obsession and use of vomiting as a weight control method. This survey of forty-one female college gymnasts at six Division I, II and III New England Schools showing that twenty-four percent has used vomiting and/or laxatives and diuretics to control weight, sixty-one percent engaged in binge eating, and twenty-one percent of the bingers used vomiting to purge after an overeating episode. Kostar's study showed that of the gymnasts surveyed, ninety-three percent were less than satisfied with their body weight, yet only seven percent were following a formal diet plan prescribed by a physician or trainer. He pointed out that it is clear, despite the fact that body weight is a prime concern to gymnasts and their coaches, methods of controlling weight seem to be left to the gymnast's discretion.

4. Another study worthy of note is that of Anthony, Wood and Goldberg (1982) of 245 college females involved in areas of study emphasizing exercise (physical and health education) or body image (dance and drama). Utilizing the Eating Attitude Test (EAT) the researchers found significantly higher scores among dance and drama students than among those majoring in physical and health education (or English). Their findings provide further indication that those at risk to eating disorders gravitate towards activities of endeavour that emphasize body image, rather than towards areas merely emphasizing physical exercise.

The message seems to be clear here for fitness leaders and instructors: namely, physical activity in and of itself does not precipitate eating disorders; however, if programs are presented with an emphasis on body image as the means to lose weight, they may very well serve as a precipitating or perpetuating activity for the eating disordered individual.

As pointed out by Dr. Andrew Brodman, psychiatrist at Massachusetts General Hospital at Boston in The Physician in Sports Medicine, Nov., 1985:

> Excessive exercise has always been a feature of eating disorders, even before eating disorders became as prevalent as they are today. With the explosion of exercise over the past twenty years, people who previously exercised alone in their room may now exercise in an organized fashion because it is more socially acceptable than it used to be. It is also a way to channel their excessive need to exercise. So you may see more eating disorders among people engaging in exercise. (Brodman, 1985: 94)

Along the same lines, Lisa Peterson, a seventeen-year-old running anorexic pointed out, "Running didn't cause me to become an anorexic, but it offered a perfect excuse to burn off imaginary 'excessive calories'." (Peterson, 1986: C5).

A confidential survey conducted in 1986 by doctors associated with the American College of Sports Medicine polled 182 university athletes in nine sports. Eight of seventeen distance runners who responded admitted that they used self-induced vomiting, laxatives and diet pills to lose weight. Only five of nineteen gymnasts said they ate normally. (Windsor Star, 1986: C3)

Brooks Johnson, Stanford track coach and head of the 1984 U.S. women's Olympic program, is convinced eating disorders are becoming more common among college athletes. "The problem is more or less directed towards distance programs, more so at elitist schools because of the type of people who attend them." (Windsor Star, 1986: C5). Kate Moore, women's track coach at Columbia University in New York City, concurs and goes on to point out,

> One coach in my league jokingly refers to the 10,000 m in the college nationals as the 'anorexic parade.' Some coaches fear that if their athletes undergo therapy for an eating disorder, they may never return to their event as competitively driven as before. What is the source of motivation for the athlete? And will the psychiatrist work successfully with the athlete to replace the unhealthy drive with a motivation that is healthy? Also coaches harbour a slight suspicion that doctors will encourage athletes to abandon a sport altogether. Coaches have a vested interest in their athletes that sometimes is myopic, because coaches' success is contingent on their athletes' performances. (Moore, 1985: 95)

A recent Michigan State University survey revealed that thirty-two percent of college female athletes used techniques such as self-induced vomiting, laxatives, diet pills and diuretics to keep their weight down. The study also indicated that the group most likely to use the techniques are gymnasts (74%), field hockey players (50%), and long distance runners (47%). (Women's Sport and Fitness, 1986: 72).

Johnson, in Athletic Director and Coach (November, 1986: 4), estimates that "five out of twenty female athletes have an eating disorder, running all the way from crazy dieting to bulimia to anorexia." She warns coaches to watch female athletes for signs of obsession with weight, body changes and behaviour during meals such as seeming preoccupation with food, and leaving the table too soon to go to the washroom, presumably to regurgitate.

Former world figure skating champion, Rosalynn Summners of the United States failed to live up to expectations of winning an Olympic Gold Medal in 1984, and subsequently had to take a break from her professional skating career due to recurring bouts of bulimia (Smith, Globe and Mail, November 8, 1987: A16). Nadia Comenici failed to participate in the Edmonton World Student FISU Games in 1984 due to her emaciated condition as a result of bulimorexia. Mary Lou Retton, gold medal U.S. darling of the 1984 L.A. Olympics admitted at Toledo Hospital, Ohio in the fall of 1985 that she was under treatment for eating disorders which had developed and prevailed throughout her gymnastic career. The list goes on and on -- Kathy Ormsby, the seventeen-year-old athlete who is paralyzed from the waist down as a result of a suicide attempt by jumping off a bridge during a 10,000 m run.

Mary Wazeter is another eating disordered marathon athlete who ended up as a quadraplegic. In May of 1981, at the age of seventeen, there seemed to be no conflict between her eating disorder and her racing career. She finished eighth in the Legg's mini-marathon in New York, beating some of the world's best women road racers; won the women's division of the Pepsi 10 k race over the George Washington Bridge and set a national age group record for the half-marathon. She won an athletics-grant-in-aid at Georgetown University and had a promising academic and athletic career ahead of her. The following February on a rainy night, Wazeter left her home in Wilkes-Barre, Pennsylvania with Rusty, the family dog, and climbed a muddy river

bank to a deserted railroad bridge. She covered the same rickety wooden planks that she had run hundreds of times since Grade 7, counted to ten and jumped into the waters of the Susquehanna River (Ambur, Globe and Mail, Wed., March 19, 1983: S5). Wazeter's club coach during her high school years never had made the connection between running and eating disorders:

> I didn't know the ramifications went any further than weight. I didn't realize that when she talked of not eating, that it was a health problem.
> (Tracey Sundland, Globe and Mail, March 19, 1983: S5)

Wazeter recalls that throughout her high school career, and particularly at the Olympic development training camp at Lehigh University, "Over and over again, they would say things like, 'Now, when you girls start maturing and start getting to college and putting on weight, you really have to be careful, you really have to watch your weight'." She went on to say:

> I know now for a fact how important the weight factor is with lots of colleges, since before a visit to the University of Virginia I was told about weekly weigh-ins and a pound-penalty system for violators. When I went there to visit, I wanted to be super-thin so I could impress the coaches (Ibid)

As Canadians, we sometimes have a tendency to think that these horror stories from the United States never happen here in Canada. Unfortunately, nothing could be further from the truth. The August/September, 1986 Verve magazine carried a story, "Hooked on Perfection" which reflects a similar unwholesome relationship between sports/fitness activity and eating disorders. (Verve, August/September, 1986: 40-42, 79-80). Dr. Frank Young of Calgary's Holy Cross Hospital is quoted as saying:

> Both anorexia and bulimia are increasingly present and associated with sports with weight classifications; marathon running where 'if you're gaunt, you're in shape'; gymnastics and figure skating where extra pounds are a drag on performance and an eyesore to judges; rowing and wrestling are also involved. (Verve, 1986: 40)

Muriel LeDoux, a Montreal nutritionist, who works closely with athletes and fitness devotees, is quoted as saying, "I used to think it was mainly a problem with girls in gymnastics and figure skating - now, you name it. (Verve, August/September, 1986: 42). Self-confessed victims of physical activity and eating disorders include:

1. Barbara Warner, championship downhill skier, No. 2 on the Quebec team winner of a gold in the 1988 Olympics - the victim of bulimia and attempted suicide.
2. Mary-Ellen Wilcox, Canadian junior gymnastics champion of 1975 when she was fifteen, who, in her own words, "became a victim of her womanly body at sixteen, despite rigorously controlled eating, bottles of dextrose tablets and laxatives, and containers of honey to sustain her energy." Her legacy today - hypoglycemia and erratic eating habits.
3. Charlene Wong knows how hard it is to have the strength to do a triple axle and still look like a ballerina. In 1984 at the Canadian figure skating championships, the five-foot-four figure skater finished second when she weighed 112 lbs. She was told to lose eight pounds over the summer. She lost them and kept going, thinking the more she lost the better. By fall she weighed ninety pounds and had turned into a fitness fanatic, living on a diet of cereal and muffins.

Charlene Wong told the CBC radio program, "Morningside",

> Suddenly, dieting became more important than skating. I wasn't even really aware of it. Being a perfectionist had something to do with it, too. I am a very disciplined person. I want everything to be perfect, even my weight. (Verve, August/September, 1986: 44)

Therapist Patty Perry, Director of the Eating Disorder Clinic, Inc. of Toronto, believes that the marketing of fitness has something to do with the increase in eating disorders.

> As female consumers of fashion or fitness, we are comparing ourselves to stereotypes that are often quite disturbed in eating and exercise habits. For example, Jane Fonda has the thin, fit body women desire, but this is the result of bulimia as a teenager, abuse of speed and diuretics to stay model-svelte until her early thirties, and involvement and promotion in excessive weight control up to the present. We sell fitness as an unmixed blessing, but this is not the case. Indeed, the fad proportion of fitness may be contributing to eating disorders. Women are trying to achieve weight control through overexercise. It's not true that the more you do the more it does for you. (Verve, August/September, 1986; 79-80).

Perry goes on to point out that those who take fitness too far may be called 'obligatory exercisers'. They behave in a way similar to eating disordered athletes in that they must have an exercise fix before they allow themselves to eat anything, use exercise to burn off calories, and won't stop even if they are exhausted or injured. For them, exercise is an excessive and compulsive pursuit of the ideal body, not an activity that enhances wellbeing. Studies are beginning to show that instructors, whose jobs and lives depend on being in shape, are a high risk group for eating disorders.

Not Just for Women

Men who obsessively participate in athletics and fitness programs are also at risk on both sides of the border. Allan Kaplan, medical director of the Toronto General Hospital Eating Disorder Clinic, points out that anorexic men have increased in recent years, and indeed the origin of the name can be traced back over the centuries to a male patient. In 1874, Sir William Gull changed the name of the illness from anorexia hysterica to anorexia nervosa, as he felt the term 'hysterical' should never apply to men, according to medical history.

A Saskatoon psychiatrist, Aruna Thukur, is credited with coining the term 'anorexia athletica'. Thukur claims anorexic men are hiding behind athletic performance and fitness activity.

> They start by controlling their weight and then lose their grip with normalcy . . . Participaction (a nationally advertised fitness program) has gone too far. (Growe, Toronto Star, May 9, 1986: B1)

Pierre Chartier, a member of the Canadian National Fitness Leaders Training Program, has coined the phrase, exercise anorexic.

Although both males and females with eating disorders tend to be intelligent and of the upper social class, males are more often underachievers, working harder, but often in a chaotic and haphazard way, unlike the obsessively ordered work rituals of females (Psychology Today, May, 1983: 21). Yates (1985) has pointed out

> The life test for women is attractiveness. For men, the test is declining strength. The girl is put to the test in early adolescence, whereas the test of the male occurs in adulthood. A good number of male anorexics are middle-aged. (Yates, 1985: 252)

What Should the Fitness Instructor/Coach Know and Do?

Listed below in Table 1 - The Eating Disordered vs Fitness/Athletic Female are the features put forward by McSherry (1984) to help fitness instructors, coaches and physical and health education specialists distinguish between features of the normal athlete/fitness participant and the athlete/exercise anorexic/bulimic. A shared features area displays some of the red flags which should alert identifiers to early warning signs.

TABLE 1

The Eating Disordered Versus The Athletic Female/Fitness Participant

Red flags:
- Dietary faddism
- Controlled calorie consumption
- Specific carbohydrate avoidance
- Low body weight
- Resting bradycardia and hypotension
- Increased physical activity
- Amenorrhea or oligomenorrhea
- Anemia (may or may not be present)

Distinguishing features of the athlete/fitness participant:
- Purposeful training
- Increased exercise tolerance
- Good muscular development
- Accurate body image
- Body fat level within defined normal range
- Increased plasma volume
- Increased O_2 extraction from blood
- Efficient energy metabolism
- Increased HDL_2

Distinguishing features of the athlete/exercise anorectic/bulimic:
- Aimless physical activity
- Poor or decreasing exercise performance
- Poor muscular development
- Flawed body image (believes herself to be overweight)
- Body fat level below normal range
- Electrolyte abnormalities if abusing laxatives and/or diuretics
- Cold intolerance
- Dry skin
- Cardiac arrhythmias
- Lanugo hair
- Leucocyte dysfunction

Table 2 - Symptoms of Eating Disorders lists the danger signs for physicians/researchers, as well as coaches/fitness instructors adapted from Peter Zucker, The Physician in Sports Medicine, November, 1985: 99.

Table 2

Danger Signs for Physicians/Researchers	Danger Signs for Coaches/Fitness Instructo
Anorexia Nervosa: - Weight loss - Social withdrawal - Personality change - Obsession with food, weight, and dieting - Increased compulsive exercising - Amenorrhea (secondary or primary)	Anorexia Nervosa: - Weight loss - Obsession with exercise - Withdrawal, "loner" - Concern with weight, diet, and appearance - Overlying sense of unhappiness - Stress fractures, shin splints, etc. - Avoids social eating situations - Increase in speed and endurance
Bulimia: - Weight loss - not extreme - Long periods in bathroom after meals - Multiple somatic complaints - Binging (may alternate with fasting) - Drug abuse - illicit, laxative, ipecac - Amenorrhea - secondary	Bulimia: - Irregular weight loss - Variable performance - Drug abuse - Binges - Disappears after binges - Multiple complaints, weakness, aches and pains - Minor theft - food, money, equipment

Kim Armitage, BANA-Can/Am Health/Fitness Counsellor at the Summer Camp for Young People with Eating Disorders, recounts tasks for Eating Disorders and Fitness/Aeorbics Classes in Table 3 and Fitness/Aerobic Class Tips on Prevention in Table 4.

TABLE 3

Eating Disorders and Fitness/Aerobics Classes

N.B. Since many people suffering from eating disorders use exercise to control their weight, fitness leaders and professionals should be aware of and actively look for people with symptoms.

Fitness/Aerobic Instructors should look for: (as well as usual signs of anorexia and bulimia)

- compulsive exercising; workouts daily or several times a day, keeping up a high pace of activity, even during designated pauses
- rapid weight loss or fluctuations with continual dissatisfaction with body expressed by participant
- tired, "dragged out" facial expression
- movements appear very forced; bursting energy lacking
- frequent questions about food, diets, and weight loss; often the same question reworded
- irregular or high heart rate for bulimics
- dizziness, fainting

Fitness Appraisers should look for:

- abnormal EKG's during exercise; inverted T-waves, ST depression
- high, irregular heart rates
- should not do maximal aerobic testi
- often predisposed to heart attacks due to electrolyte imbalance
- if disorder is known, get electrolytes tested before aerobic or maximal muscle strength tests

TABLE 4

Fitness/Aerobics Class Tips on Prevention

For Instructors:

- make your focus of class clear to the participant in question
  * you are interested only in health, not weight loss as such
- keep heart rate below 85% maximum minus resting (70% to be safe)
- if you are in a community environment you may feel safe bringing up the topic in class either with discussion or written material

For Fitness Class Participants:

- remember health does not equal thin or weight loss
- body needs fuel to run on - just like a car. If you do an aerobics class without eating, that is like driving a car 100 miles with an empty tank of gas
- the brain needs glucose to function properly; if you exercise without eating the blood glucose is low; the muscles feel sluggish but they will use up the blood glucose and "starve" the brain. This causes black outs and dizziness.
- you should eat ½ to 2 hours before exercising to make sure food is digested somewhat
- for anoruxics and bulimics carbohydrates would be best because they digest quicker than protein and fat
- focus on fun. If you enjoy exercising as much as you say you do, then you don't need to push yourself
- everyone's body needs a rest. Sometimes a week or even a month "off" of a regular exercise is rejuvenating
- avoid compulsiveness: "I've got to finish the 10K", "I've got to go to aerobics every day". Use variety and listen to what your body wants to do, not your compulsivity.

Track coach Kate Moore of Columbia University provides good direction when she points out, "You must learn about nutrition." (Moore, November 1985: 96). Fitness instructors, coaches, physical educators, doctors and trainers are generally interested in nutrition, but unfortunately, much of this focuses on losing weight rather than gaining weight, or managing weight to the 'set point' level for maximum health for the participant. We should focus on weight to service the health of the individual, rather than weight to maximize performance in the fitness program or sport activity.

It is essential to disseminate information about amenhorrea, osteoporosis, pathological fractures, and signs, symptoms and characteristics of eating disorders and electrolyte imbalance. If you do detect signs of an eating disorder, you should deal with it in the same manner as you would with any other health and life-threatening illness, i.e., diabetes, cancer, angina, etc. Be assumptive and assertive. Don't ask, "Do you have a problem?" Assert, "I have been watching you and I would like to help you with your eating disorder." If the fitness participant or athletes denies that s/he has a problem, reassert, "It is very obvious to me that you have a problem. I am not going to go along with this. I am not going to participate in your demise. You must seek medical assistance with someone knowledgeable in the eating disorder area and secure their assistance before you can compete or participate in this program."

Donald Heitzinger, in addressing the University of Windsor BANA-Iona College Conference on "Alcohol, Drugs and Eating Disorders" (October, 1984) pointed out the need for a Tough Love approach to eating disordered individuals, similar to that employed with those addicted to alcohol and drugs. "One on one, the addicted person (alcoholic, drug addict, or eating disordered individual) will beat you every time! You need the assistance of a competent professional and other significant individuals so that you can help the addicted individual help themselves." Indicate that you will be as supportive as you can, but they need professional help with a knowledgeable eating disordered person.

In addition to the professional and personal obligation for fitness instructors and coaches to behave in this way, there is also the legal consideration. Prudent professionals have the right and responsibility to check the medical fitness of those participating in vigorous fitness and sport programs, to refer them to appropriate medical authorities for assessment and to disassociate them from the program if need be, not only for the benefit of the participant, but also the professional reputation of the sponsoring association.

5. Media

Over the past several years, women have been confronted more aggressively by the media by the 'thin body image'. Fashion places an enormous emphasis on slimness. Magazines and movies carry the same message, but the most persistent is television, drumming it in, day in and day out, that one can be loved and respected only when slender. A thin body shape is considered by women to be the most important aspect of physical attractiveness.

In the past the media has trivialized anorexia nervosa and bulimia. Certain magazines have referred to it as the 'Golden Girls' Disease'. They have played it up as a sexy illness. Movie stars have set false standards for beauty, as have some fitness and sport celebrities.

The extent of body dissatisfaction is well documented. In a Glamour Magazine survey of 33,000 females, seventy-five percent of the respondents felt that they were too fat, although according to conservative tables, only twenty-five percent were actually overweight. Five thousand teenagers surveyed by the Winnipeg Eating Disorder Clinic felt that any means of controlling weight was better than being overweight. (Verve, August/September, 1986: 79). A study among high school students in London, Ontario showed that three-quarters were dissatisfied with their weight and that a majority were involved in dieting (Mary Hamilton, Assessment of Needs of Girls in London, 1985).

Studies at the University of California show that nearly half of the nine-year-olds and about eighty percent of the ten- and eleven-year-olds in the study were already dieting (Mellen, 1986, reported in the Windsor Star, Wednesday, November 5, 1986). When questioned on their attitude and behaviour in terms of weight, fear of fat, dieting, binge eating, purging behaviour, vomiting, they found the following results:

1. Fifty-eight percent had distorted body images, reporting themselves obese.
2. Many girls started binging early and the problem became more prevalent -- all of the eighteen-year-olds said they engaged in binge eating.

3. Purging was less common with fifteen-year-olds reporting the highest frequency -- 11%.

4. Nine percent of the nine- and ten-year-olds also said that they used at least one of the purge methods to lose weight.

Such behaviour, while alarming, is perhaps to be expected when one considers the overt and subliminal marketing of food and drink in the media. Diet pop -- "now you see it, now you don't"; Virginia Slims -- "the long, slim, elegant cigarette for the tall, sophisticated lady"; the grapefruit diet pill -- "eat whatever you want as often as you want and still lose weight." Writing a diet book seems to be one of the fastest ways to become wealthy. The ineffectiveness of dieting is on the shelves. There is no one foolproof method of losing weight, or gaining weight.

C. Peter Herman in Breaking the Diet Habit (1983) points out that "the body reacts to reduced food intake by lowering its rate of metabolism in an attempt to maintain weight." Dr. John Smith of the University of Pittsburgh agrees that eating one meal a day is the worst way to weight management. He advocates a minimum of three meals per day, but really prefers four, five or six nutrition occasions -- breakfast, a snack at 10:30 a.m., lunch, a snack in mid-afternoon and dinner or supper. Peggy Burke, writing in the Joperd Journal (March, 1987: 41-45, 50-51) on "Nutrition for Women Athletes: Commonly Asked Questions" reinforces the age-old advice that frequent nutrition breaks, including two servings of milk and dairy products; two servings of meat, fowl or fish; four servings

of vegetables and fruit (at least two leafy green or yellow vegetables); and three to five servings of bread and cereals (grain or pasta) are the best way to attain and maintain healthy nutrition and weight.

Shape and body dissatisfaction and dieting may, in large part, be attributed to our culture and society. By developing an awareness of these issues, we may begin to question and resist the oppressive values that do contribute to the severe personal suffering of eating disorders. We need much more advocacy from people in physical and health education, fitness and sport to reverse this deadly trend.

Summary

Socio-cultural factors alone do not cause eating disorders or everyone on a diet would have an eating disorder. Families alone do not cause eating disorders, or every child in an afflicted family would have eating disorders. Fitness programs, sport or athletics alone do not cause eating disorders, or everyone who participates would have an eating disorder. Parents, teacher/coaches, fitness instructors do not cause, cannot control, and cannot cure eating disorders. They can contribute, either positively or negatively, to the prevention of the problem or prognosis in this illness. A positive contribution can be made by identification, facing up to the problem, practising Tough Love intervention techniques, referral to a qualified health professional, and providing both eating disordered individual and themselves with alternate coping mechanisms and lifestyle behaviours.

It is generally acknowledged in sport and fitness circles that to date compulsive exercise and involvement in elite athletic programs has been part of the problem; however, it can be part of the solution. Coaches and fitness instructors are presented with a tough challenge:

1. Study the signs, symptoms and characteristics of eating disorders.
2. Develop the ability to identify and refer individuals with eating disorders for professional assistance.
3. Market and implement fitness for weight management rather than weight reduction, addressing the fact that being underweight is at least equally hazardous to your health as being overweight. Coaches should also council their athlete to moderation in a well-rounded mix of school, sports, and social life.
4. Incorporate fitness and related activities (dance, music, cooperative games and relaxation) as alternate stress management techniques to avoid addiction to either eating disorders, alcohol or drugs.
5. Become significant advocates of the shift from elitist image of fitness/sport which contributes to unrealistic goals and false image to mass participation and a happy and healthy moderate activity program.
6. Challenge yourself to live and present yourself as a healthy, happy role model leading a balanced life and caring for yourself as well as others.

References

Amber, Neil. (March 19, 1983) Suicide Attempted: Weight obsession problem in sports. Globe and Mail, 55.

Antony,J., Wood, I.K.,& Goldberg,S.C. (1982) Determining the populations at risk for developing anorexia nervosa based on selection of college major. Psychiatry Research, 7, 53-58.

Avener,J. (Nov.,1985) Eating disorders in young athletes. The Physician and Sports Medicine 13, 11, pp.89-106.

Bayder, S. (Nov.,1985) Eating disorders in young athletes. The Physician and Sports Medicine, 13, 11, pp 89-106.

Bemis, K.M. (1978) Current approaches to the etiology and treatment of anorexia nervosa. Psychological Bulletin, 85, 593-617.

Blumenthal,J.A., Rose, S., & Chang,J.L. (1985) Anorexia nervosa and exercise surplications from recent findings. Sports Medicine, 2, pp 237-247.

Brohman, A. (Nov.,1985) Eating disorders in young athletes. The Physician And Sport Medicine, 13,11, pp 89-106.

Bruch, H. (1973) Eating disorders: Obesity, anorexia nervosa, and the person within. Basic Books: New York.

Bruch, H. (1975) Obesity and anorexia nervosa: Psychological aspects. Australian and New Zealand Journal of Psychiatry, 9, 159-161.

Bruch, H. (1978) The golden cage. Cambridge: Harvard University press.

Brumberg,J.J. (1982) Chlorotic girls, 1870-1920: A historical perspective on female adolescence. Child Development, 53, 1468-1477.

Burke, P.N. (March,1978) Nutrition for women athletes: Commonly asked questions. JOPERD, 58, 3, pp 41-45, 50-51.

Campbell, J., Moriarty, D., & Porter,J. (July/August, 1986) Anorexia nervosa. Body dissatisfaction in a high risk population. CAHPER Journal, 52, 4, pp 36-42.

Canada Fitness Survey. (1982) Canada's Fitness: Preliminary findings of the 1981 survey. Ottawa, Ont.

Canadian Youth and Physical Activity. (1983) Ottawa: Fitness and amateur sport.

Carney, B. & Veilleux, M. (French Trans.) (1986) BANA Preventive Curriculum for Anorexia Nervosa and Bulimia. Windsor, Ont.: BANA - Can/Am.

Castagna, K. (1983) Psychological aspects of eating disorders. Audio and TV tape of presentation at the first annual conference of the Can-Am Bulimia and Anorexia Nervosa Association, held at Windsor, Ontario, September 14, 1983.

Crago, M., Yates, A., Beutler, L.E., & Arizmendi, T.G. (1985) Height and weight ratios among female athletes: Are collegiate athletics the precursors to an anorexic syndrome? International Journal of Eating Disorders, 4, 1, 79-87.

Crisp, A.H. (1977) Some psychobiological aspects of adolescent growth and their relevance for the fat/thin syndrome. International Journal of Obesity, 1, 231-238.

Crisp, A.H. (1980) Anorexia nervosa: Let me be. Academic Press: London.

Crisp, A.H. (1981) Anorexia nervosa at normal body weight: The abnormal weight control syndrome. International Journal of Psychiatry in Medicine, 11, 203-233.

Crisp, A.H., Hsu, L.K.G., Harding, B., & Hartshorn, J. (1980) Clinical features of anorexia nervosa: A study of a consecutive series of 102 female patients. Journal of Psychosomatic Research, 24, 179-191.

Crisp, A.H., Palmer,R.L., & Kalucy, R.S. (1976) How common is anorexia nervosa? A prevalence study. British Journal of Psychiatry, 128, 549-554.

Diet High (June, 1983) Self.

Do women start smoking for weight control? Canada Fitness Survey Highlights, No. 20. Ottawa, Ont.

Enright, A.B. (1982) Interview in Windsor, April 15 at L'Auberge.

Feighner, J.P., Robins, E., Guze, S., Woodruff, R., Winokur, G., & Munoz, R. (1972) Diagnostic criteria for use in psychiatric research. Archives of General Psychiatry, 26, 57-63.

Fitness and Aging. (1983) Ottawa: Fitness and Amateur Sport.

Fitness and Lifestyle in Canada. (1983) Ottawa: Fitness and Amateur Sport.

Frisch, R.E. (1983) Fatness and reproduction: delayed menarche and amenorrhea of ballet dancers and college athletes, in Darby, Padraig, Garfinkel,P.E., Garner, D., & Cascina, D.V. Neurology and Neurobiology, Vol. 3. Anorexia nervosa: recent developments in research. New York: Alan R. Liss, Inc.

Garfinkel, P.E., & Garner, D. (1982) Sociocultural Factors, in Anorexia Nervosa: A Multidimensional Perspective. New York: Brunner/Mazel, Publishers: 100-120.

Garfinkel, P.E. (1981) Some recent observations on the pathogenesis of anorexia nervosa. Canadian Journal of Psychiatry, 26, 218-223.

Garner, D., & Olmstead, M.P. (1984) Eating Disorders Manual. Washington, D.C.: A.P.A. Psychological Assessment Resources, Inc.

Garner, D.M. & Garfinkel, P.E. (1978) Socio-cultural factors in anorexia nervosa. The Lancet, 2, 674.

Garner, D.M. & Garfinkel, P.E. (eds.) (1985) Handbook of Psychotherapy for Anorexia Nervosa and Bulimia. New York: Guilford Press.

Garner, D.M., Garfinkel, P.E., Schwartz, D., & Thompson, M. (1980) Cultural expectations of thinness in women. Psychological Reports, 47, 483-491.

Garner, D.M. (1984) Eating disorders and sport/fitness programs, Iona Conference on Alcohol, Drugs and Eating Disorders at the University of Windsor. (proceedings available on audio tape)

Garner, D.M. (1984) Research on eating disorders and sport/fitness participation, Ottawa Cahper, Ottawa, Ontario, Canada. (presentation available on audio tape)

Growe, S.J. (May 9, 1986) The Anorexic Man. Toronto Star, p E1.

Guthrie, S. (1985) The incidence and development of eating disorders within a selected intercollegiate athletic population, unpublished doctoral dissertation proposal, Ohio State University.

Hall, K. (April 7, 1987) Signs of aging can be postponed. Windsor Star, p B1.

Hamilton, M. (1985) Initiation into womanhood: Transpersonal exercises for adolescent girls and women. Unpublished M.Ed. degree, University of Western Ontario.

Hasselbring, B. (Dec., 1986) Are you running too thin? Women's Sports and Fitness, pp 70,72.

Heitzinger, D. (Dec.,1983) Combatting the drug problem without being a policeman. Athletic Director & Coach. Letter 228, p 1.

Hooked on Perfection (Aug/Sept, 1986) Verve, pp 40,42,79,80.

Hope, J. & Bright-See, E. (Nov. 9, 1983) Lean to Extreme Unhealthy, Like Fat. Windsor Star, p E10.

Huenemann, R.L., Shapiro, L.R., Hampton, M.C., & Mitchell, B.W. (1966) A longitudinal study of gross body composition and body conformation and their association with food and activity in a teen-age population. American Journal of Clinical Nutrition, 18, 325-338.

Ideal Weight (Sept., 1983) Vogue, p 706.

Jones, J.L., Fox, M.M., Babigian, H.M., & Hutton, H.E. (1980) Epidemiology of anorexia nervosa in Monroe County, New New York: 1960-1973.

Johnson (Nov. 1986) Female athlete and eating disorders. Athletic Director & Coach, p 4.

Kalucy,R.S., Crisp, A.H., Lacey, J.H. & Harding, B. (1977) Prevalence and prognosis in anorexia nervosa. Australian and New Zealand Journal of Psychiatry, 11, 251-257.

Kendall, R.E., Hall, D.J., Hailey, A., & Babigian, H.M. (1973) The epidemiology of anorexia nervosa. Psychological Medicine, 3, 200-203.

Klackholn, C. (1954) Mirror for man New York: McGraw-Hill.

Leichner, P. (June,1985) Anorexia Nervosa, Bulimia and Exercise. ANAB, Canada, #4: 1.

Leuson, P., Yarasheski, K.S., & Dolney, D.G. (1984) The Importance of protein for athletes. Sports Medicine,1, pp 474-484.

Marazzie, M.H., Mertz,L, & Leiby, E. (summer, 1986) For want of appetite. Wayne Medicine, 2, 3, pp 3-7.

Moore, K. (1985) Eating disorders in young athletes. The Physician & Sport Medicine, 13,11, pp 89-106.

Moriarty, D. & Moriarty, M. (July/Aug., 1986) Sport/Fitness programs and socio-cultural influences in eating disorders. CAHPER Journal, 52, 4, pp 4-9.

Nylander, I. (1971) The feeling of being fat and dieting in a school population. Acta Socio-Medica Scandanavica, 1, 17-26.

Orbach, S. (1979) Fat is a feminist issue New York: Berkley Books.

People Magazine. (August, 1983) "Sucking Weight" and "Gymnasts Strive Dangerously for the Comaneci Look."

Porter, J., Morrell, T., & Moriarty, D. (July/Aug., 1986) Evaluation of a pilot project for early and pre-adolescents. CAHPER Journal, 52, 4, pp 21-26.

Restak, R. (Aug. 21, 1984) He ran a perfect marathon. The Medical Post, pp 62-64.

Rosenbaum, M. (1970) The changing body image of the adolescent girl. In M. Sugar (Ed.), Female Asolescent Development, pp 234-252.

Schermer, T. (Oct.,1983) Physiological and Psychological Service to University Students, at National Anorexic Aid Society (NAAS) Conference at Columbus, Ohio.

Schiullo, M. (July 17, 1986) Athletes susceptible to eating disorders. Windsor Star, p C5.

Schwartz,D.M., Thompson, M.G. & Johnson, C.L. (1982) Anorexia nervosa and bulimia: The socio-cultural context. International Journal of Eating Disorders, 1, 20-26.

Slager, J.M. (1984) Reversibility of amenorrhea in athletes. Sports Medicine, 1, pp 337-340.

Slavin, J.B. (March, 1987) Eating disorders in athletics. JOPERD, 58, 3, pp 33-36.

Smith, B. (Sat.,Nov. 8, 1986) Food Threatens Skaters Career. Globe & Mail.

Smith, J. (Nov., 1986) Fat Fear Hits Girls Too Early. Windsor Star p C10.

The Little Known Male Anorexic. (May,1983) Psychology Today, p 21.

Theander, S. (1970) Anorexia nervosa: A psychiatric investigation of 94 female patients. Acta Psychiatrica Scandanavica (Suppl.), p 214.

Thompson, M., & Schwartz, D. (1981) Life adjustment of women with anorexia nervosa and anorexia-like behavior. International Journal of Eating Disorders, 2, pp 47-60.

Wrestling without loss. (April, 1983) Science, p 86-87.

Yates, A., Leehey, K., & Shisslak, C.M. (1983) Running - an analogue of anorexia? New England Journal of Medicine, 308, 251-255.

Zimmerman, J. (Nov., 1985) Eating disorders in young athletes. The Physician and Sports Medicine, 13, 11, pp 89-106.

Zucker, P. (Nov., 1985) Eating disorders in young athletes. The Physician and Sports Medicine, 13, 11, pp 89-106.