

DOCUMENT RESUME

ED 409 504

CG 027 808

AUTHOR Moriarty, Dick; Moriarty, Mary  
TITLE Eating Disorders among Athletes: Public Policy To Promote Social and Individual Behavioral Change.  
PUB DATE Mar 97  
NOTE 22p.; Paper presented at the Annual Meeting of the American Alliance for Health, Physical Education, Recreation, and Dance (St. Louis, MO, March 20-24, 1997).  
PUB TYPE Information Analyses (070) -- Speeches/Meeting Papers (150)  
EDRS PRICE MF01/PC01 Plus Postage.  
DESCRIPTORS Adolescents; \*At Risk Persons; Children; College Students; \*Eating Disorders; Elementary School Students; Elementary Secondary Education; Foreign Countries; \*High Risk Students; Higher Education; Prevention; Psychological Patterns; \*Public Policy; Secondary School Students; \*Student Behavior; \*Symptoms (Individual Disorders); Young Adults  
IDENTIFIERS Athletic Abuses; \*Student Athletes

ABSTRACT

Eating disorders are a complex physiological, psychological, and social illness. Since teachers and coaches should know the signs of eating disorders, some of the ways in which educators can recognize or prevent eating disorders are presented in this paper. Emphasis is placed on teachers and coaches familiarizing themselves with the five "Ps" which include: (1) Predisposition, or the personality types prone to eating disorders; (2) Precipitation, or the initiation of a diet or sport that has been identified with the development of an eating disorder; (3) Perpetuation, or the addictive nature of such disorders; (4) Professional help, which is needed to accurately diagnose and treat eating disorders; and (5) Prevention, which is the best form of treatment for these types of disorders. Particular emphasis is placed on public policy and arguments are made that sports legislation must be updated to be more attuned to the dangers posed by eating disorders. The efficacy of public policy is discussed and evidence for the use of public policy in protecting children using case studies for alcohol and tobacco, is presented. Athletic policies, it is stated, must define precise, acceptable behaviors related to the prevention of pathogenic attitudes and behaviors and the improper use of weight loss methods. Steps on how to enact policies addressing eating disorders are presented. (RJM)

\*\*\*\*\*  
\* Reproductions supplied by EDRS are the best that can be made \*  
\* from the original document. \*  
\*\*\*\*\*

# EATING DISORDERS AMONG ATHLETES: Public Policy to Promote Social and Individual Behavioral Change

*Dick Moriarty*  
*Mary Moriarty*

University of Windsor, Windsor, Canada

BEST COPY AVAILABLE

"PERMISSION TO REPRODUCE THIS  
MATERIAL HAS BEEN GRANTED BY

Dick Moriarty

TO THE EDUCATIONAL RESOURCES  
INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION  
Office of Educational Research and Improvement  
EDUCATIONAL RESOURCES INFORMATION  
CENTER (ERIC)

This document has been reproduced as  
received from the person or organization  
originating it.  
 Minor changes have been made to improve  
reproduction quality.

Points of view or opinions stated in this docu-  
ment do not necessarily represent official  
OERI position or policy.

CG027808

**EATING DISORDERS AMONG ATHLETES: PUBLIC POLICY TO  
PROMOTE SOCIAL AND INDIVIDUAL BEHAVIORAL CHANGE**

By Dick and Mary Moriarty  
University of Windsor, Windsor, Canada

Bulimia consists of recurring episodes of binge eating, in which the person feels unable to stop eating voluntarily, followed by a variety of weight control methods, such as self-induced vomiting, fasting, consuming diuretics and purging with laxatives or exercise. Anorexia nervosa is an emotional disorder characterized by an intense fear of normal weight, lack of self esteem and distorted body image, which results in self-induced starvation. Eating disorders are a complex physiological, psychological and social illness.

Teachers and coaches should familiarize themselves with the signs, symptoms and characteristics of eating disorders so that they can play their role in detection, referral, treatment and prevention of eating disorders. In addition, they should familiarize themselves with the five 'Ps', i.e., who is Predisposed to an eating disorder, what might Precipitate and Perpetuate an eating disorder, what do you need in the way of Professional help and what role do teachers and coaches have to play in Prevention.

In terms of predisposition, Type A personalities, perfectionists and success-oriented people may be predisposed to succumb to eating disorders. These people usually are tops in school, sports and social life - overachievers in a paternalistic, elitist system. School and sport organizations often are programmed to burn out the best young people - the givers and the

doers.

In terms of precipitation, initiation of a diet or sport or fitness program has often been identified with the development of an eating disorder. Certainly any change in the person, such as occurs at adolescence, or in the situation such as moving from one level of education to another, or one level of competition to another, may trigger a bout of eating disorders. Teachers and coaches should be sensitive to changes in the lives of their students and athletes. Any loss such as the death of a parent or loved one, or perceived loss, such as breaking up with a boyfriend, or being subjected to sexual harassment or abuse, could lead to an eating disorder. Certainly teachers, coaches and other health professionals should avoid counselling for dieting.

In terms of perpetuation, eating disorders appear to be addictive in nature. Drs. Marrazzi & Luby (1986, 1989) have both animal and human research which suggests that the auto-opiate system releases endorphins which lead to a 'high' when someone starts on a diet and engages in excessive exercise. As people become physiologically and psychologically addicted, the exercise and diet which started out as a solution to the problems of life becomes the problem. Individuals confuse concern with criticism, since it is difficult to reason with a starving person. Anorexics deny they have a problem; bulimics admit it, but maintain they will take care of it on their own. 'Tough love' usually is required to get the student into treatment.

Professional help requires accurate diagnosis and appropriate

treatment. A team approach is advocated, with some combination of a medical doctor, clinical nurse, nutritionist or dietician, social worker, working in cooperation with a psychiatrist or psychologist. A variety of treatments are available: i.e., in hospital, day hospital and outpatient - in a variety of programs including behavior modification, cognitive therapy, educational therapy, psychotherapy, pharmacological (drug) therapy, and/or family therapy. Frequently, these treatment modalities are augmented with self-help and support group activities. Eating disordered individuals and their significant others (teachers, coaches, parents peers and other loved ones) should appreciate the fact that 'it's a long, bumpy road to recovery.' However, 'there is life after eating disorders.'

Prevention is the best form of treatment. Physical and health educators and coaches have an indispensable role to play in primary prevention of eating disorders (before they occur) and in secondary prevention (cutting down on the chronicity of this illness by early identification and referral).

The role of the health professional is to discourage dieting by pointing out that when you diet your system shuts down. Dieting while growing leads to stunting of growth, malnutrition and adverse effects on hair, nails, teeth, bones, skin and ultimately to osteoporosis and in extreme cases, death. The set point theory of weight and acceptance of their own body size and shape should be instilled at a very young age.

Advocate a well rounded life developing mind, body and spirit.

Coaches and teachers of physical and health education, in addition to teaching skills, knowledge and attitude can also teach stress management behavior. Subjects like physical and health education, as well as art, dance, cooperative games, music and drama, are fraught with potential as stress management alternatives to substance abuse (alcohol, drugs or food). A curriculum has been prepared for young women and men to appreciate and meet the different physiological, psychological social and cultural challenges that they will meet. A Preventive Curriculum for Anorexia Nervosa and Bulimia (Carney, 1986) produced and distributed by BANA in cooperation with CAPHER has been used in both English and Francophone schools around the world and evaluated as effective (Moriarty, Shore and Maxim, 1990).

A sixth P should be added to this list - public policy. Dr. Robert Woodard, at the University of British Columbia, has maintained that there is a greater degree of suffering than the sport society is willing to admit. He asks, "Are we or are we not killing kids to get gold medals?" He maintains that the injuries of young gymnasts are remarkably similar to young children working in Scottish coal mines at the turn of the century. Twenty to thirty percent of the top British Columbia gymnasts have significant skeletal injuries beyond what would be expected or what should be tolerated by society. Like nineteenth century children working in the coal mines, gymnasts put in seven to ten hours of work a day and are malnourished to keep them prepubescent and small. Gymnastics is very much a similar occupational and health hazard.

### Public Policy and Sport Legislation

Public policy law was passed at the turn of the century prohibiting child labor and malnutrition in the Scottish coal mines. We need similar laws to prohibit children from participating in child sport labor and prepubescent competition. At the turn of the century Scotland, and it might be added Canada and the U.S.A. passed laws prohibiting child labor in coal mines and preventing the practice of starving children to keep them small and prepubescent so they could work in the mines for six to eight hours. Sport needs similar legislation. Just as we have an Occupational Health and Safety Act in Canada or the Safety and Health Act as it is called in the U.S.A., we need a Sport Health and Safety Act to protect participants from themselves and to guide and hold accountable the sport establishment for the management of sport programs.

Dr. David Black of Purdue University in the U.S.A. and B.A.N.A. in Canada advocate a program to deal with eating disorders in sports through the use of an education and information policy applied to athletes and coaches, as well as contingency and sanction policies applied to athletic institutions. Components include:

1. Information and education for athletes stressing the value of proper nutrition, moderate lifestyle and the detrimental health effects of maladaptive behavior and malnourishment. A nutritional diet would be a prerequisite to participation in sport.

2. Coaches, trainers and athletic administrators who advocate proper nutrition and health training, along with athletes who participate in these programs, would be recognized and rewarded.
3. There would be noncompliance penalties for sport organizations who fail to adhere to the nutritional guidelines and standards, or who encourage and condone unhealthy nutrition or exercise habits (similar to penalties for violation of drug use). These violators would be placed on probation.
4. Promotion of products and sports which advocate a healthy body image would be encouraged and sponsors in sports who portray the thin image versus the healthy image would be disallowed.

Eating disorders are a public health concern. Studies indicate eating disorders among athletes is dramatically higher than among the general population and/or college students. Public policy is advocated as the primary but not exclusive means to promote societal and individual behavior change.

Societal/environmental factors are the primary determinant of eating disorders among athletes. Public policy is proposed to alter the detrimental and deleterious influences of society and the sports environment.

Eating disorders are particularly pronounced among athletes. Anorexia nervosa is 3 times higher and bulimia nervosa is 21 1/2 times higher among college athletes than the general population (Burckes-Miller & Black, 1988). In United States and Canada it is estimated that 12,000 college athletes would satisfy the medical criteria for anorexia nervosa and 82,000 athletes meet the criteria for bulimia nervosa. One out of every four (24.5%) or 94,000 student-athletes present symptoms that satisfy the medical criteria

for an eating disorder.

Athletes have more problems with eating, dieting, and body image, especially individuals participating in sports which emphasize thinness to enhance performance or appearance.

National athletic associations have expressed concern about eating disorders and athletes. The American Alliance for Health, Physical Education, Recreation and Dance (AAHPERD) commissioned two books on this topic (Black, 1991; Holliman, 1991). The Canadian Association of Health, Physical Education, Recreation and Dance (CAHPERD) produced a special issue of its journal (CAHPER Journal, 1986). The Canadian Sport Nutrition Advisory Council of the Sport Medicine and Science Council published "Eating Disorders and Sports (SNAC, 1995) and produced "Desperate Measures: Eating Disorders in Athletics" a film on eating disorders and sports (1990). Bulimia Anorexia Nervosa Association (BANA) has produced numerous publications and films including a Prevention Curriculum for Anorexia and Bulimia (Carney, 1986). The National Collegiate Athletic Association (NCAA, 1990) sponsored a three-part videotape (Hand, 1989a, 1989b, 1989c). A third book has been published on the topic (Brownell et al., 1992).

Social Cognitive Theory (SCT), Bandura's (1977) concept of triadic reciprocity, purports that: environmental factors bilaterally interact with behavior and cognitions. Social environment is a central force in influencing attitudes and behavior, especially among athletes, (Black, 1991). Fame, fortune, and public recognition accompany superior athletic performance (Levine, 1992). Athletes face continual pressure to improve athletic performance to gain a competitive edge (Smith &

Worthington, 1989). Potent contingencies have a powerful and direct effect on human behavior whether deleterious or beneficial (e.g., Skinner, 1969).

Six sociological factors: (1) Emphasis on thinness, (2) glorification of youth, (3) changing roles of women, (4) media, (5) sport/fitness craze (Moriarty, 1993) and (6) community, peers, coaches, and family (Black, 1991).

1. No woman is perceived to be too thin or too rich as the Late Duchess of Windsor said. 2. Glorification of youth for a woman is not how good you look but how long you look good. 3. Women are expected to do it all (Super Mother, career woman, and athlete) and do it all in a Size 5 dress. 4. The MEDIA exerts ideal standards for an "athletic" or "fitness look". 5. The SPORT/FITNESS CRAZE by the sport/fitness establishment has resulted in better athletes through starvation and steroids (Moriarty, 1993). 6. The college campus community, peers, coaches and family may subtly or overtly sanction unhealthy behaviors, attitudes and weight loss methods (Burckes-Miller & Black, 1991).

The college campus **COMMUNITY**, stressful and semi-closed, include dormitories, fraternities or sororities, and student organizations. Academic and social pressures of campus increase vulnerability to developing a wide range of clinical symptoms.

**PEERS** influence athletes, especially teammates. Strategies to regulate weight or food intake may be a way to gain acceptance and approval, or as passage rights to feel included. Peer acceptance plus desire to improve performance may lead to a higher prevalence of eating disorders among athletes participating in sport.

**COACHES** play a key role, especially in the area of weight

regulation. Some practices of coaches may encourage disordered eating, and pathogenic attitudes and behavior about eating, exercise, and weight loss (Burckes-Miller & Black, 1991).

**ROLES OF MEN AND WOMEN** are changing rapidly in society. According to Striegel-Moore et al. (1986), the mesomorphic male is associated with perceived masculinity. Female athletes face many dilemmas when they must make decisions about family priorities and their careers as athletes.

The most dramatic and direct way to change the environment is through public policies by athletic organizations, colleges and universities, or through federal and state/provincial mandates.

#### **Advocation of Public Policy**

##### Conventional Medical and Psychological Treatments

Current methods of treatment include inpatient and/or outpatient and a variety of treatments: psychotherapy, cognitive therapy, pharmacology, behavior modification, family therapy, effort by doctors and medical support personnel such as internists, endocrinologists, psychiatrist, psychologists, clinical nurses, social workers, dieticians, and a variety of therapists.

Hue (1980) reported about one-half of the population will continue after treatment to have dysfunctional eating habits.

Anorexia nervosa and bulimia nervosa are highly refractory to treatment. Healthcare services alone are insufficient to eradicate eating disorders.

##### Efficacy of Public Policy

A convincing argument for the application of public policy to eating disorders and athletes is its effects on health problems in the past. Public Health tools have been the informed use of

regulatory policies and laws to protect the health of communities. Most of the improvement in health realized by U.S. citizens in the past century is attributable to effective public health policies (Palumbo, 1988).

There is nothing new nor particularly novel in the use of policy to combat health problems: 1. school vaccinations against infantile paralysis in the early 1950's; 2. Fluoridation to combat cavities, quarantines, and other readily identifiable historical situations; 3. Some had narrow goals such as vaccinating to eradicate small pox (Palumbo, 1988); 4. Health policies are important in ameliorating chronic diseases of the heart, cancer and stroke. Chronic disease can be prevented through better living habits, improved environmental conditions, and eating prudent diets (Healthy People 2000, 1991). Chronic illness is not just internal but is fuelled by external forces in the social and physical environment (Rosengren, 1980).

5. Public policy has resulted in modification of individual behavior choices such as cigarette smoking and the consumption of alcohol. 6. Milio (1981) suggested that environmental policies play a role, particularly their biophysical and socioeconomic facets, are predominant in establishing patterns of behavior.

#### **Evidence for the Use of Public Policy**

Public Policy has been used to abate the consumption of alcohol and tobacco.

##### Case 1 - Alcohol

1. Public policy reduces alcohol-related motor vehicle crashes. The "minimum drinking age" (Farrell, 1989) was examined in the early 1970's and as a result, nearly 30 states lowered the minimum

age for the purchase, possession, and/or consumption of alcoholic beverages. Soon afterward, there was a "dramatic increase" in the rate of alcohol-related crashes involving 18, 19, and 20-year olds (U.S. General Accounting Office, 1987).

2. A decrease in the minimum drinking age is usually associated with an increase in the rate of alcohol-related crashes among young drivers directly affected by the change in the law.

3. Sin taxes (increased tax on tobacco and alcohol) have been effective in Canada and America. Cook (1981) studied the impact of 38 changes that increased state taxes on distilled spirits which occurred between 1960 and 1975 in 30 states. Though relatively small increases, nearly two thirds of them were followed by a greater reduction in the auto fatality rate than occurred in the median state in the same year. Cook (1981) concluded that an increase in taxes on distilled spirits in the U.S.A. tends to reduce the auto fatality rate.

4. Saffer and Grossman (1987) found that states with higher real beer taxes have lower motor vehicle fatality rates for three separate age groups (15-17, 18-20, and 21-24).

5. There is substantial literature on the relative effectiveness of education/rehabilitation and license suspension/revocation in reducing subsequent drinking and driving violations and traffic crashes.

6. Peck et al. (1985), concluded there is no question that license suspensions reduced the accident and drunk driving frequency of persons convicted of driving under the influence of alcohol.

1. In 1964, the first Surgeon General's Report was published and there was a brief downward trend in tobacco use. The tobacco industry made a successful but brief recovery from the decline by developing an aggressive lobbying campaign to market products that were designed to appear safe (Tye et al., 1978).

2. Counter-advertising campaigns aired on television under the Fairness Doctrine Act from 1967-1970. Although counter-ads were allotted only a third of the air time given to cigarette advertising, data suggest they appeared to contribute significantly to a decline in cigarette consumption.

3. In the early 1970's, the nonsmokers' rights movement began restricting smoking in public places and worksites. Since then, adult per capita cigarette consumption has declined.

As a result of the "anti-smoking campaign", it is estimated that from 1964 to 1985, 868,000 deaths were postponed, and 2.3 million tobacco related deaths will be postponed or avoided between the years 1986 and 2000.

The alcohol and tobacco case studies provide evidence for the undeniably positive impact of public policy. Public policy directed at athletes could also have an equally positive impact on the eradication of eating disorders.

#### Definition of Public Policy

Public policy refers to any plan or set of rules to guide present and future behavior of individuals and organizations to achieve a specific goal (cf. Elder et al., 1991). In Webster's New World Dictionary (1987), a rule is an established regulation or guide for conduct, procedure, or usage. The plan is to eradicate,

reduce, or control eating disorders, and pathogenic attitudes and behaviors related to food, weight, and exercise among athletes. The rule is to eat a prudent, well-balanced diet and to maintain body fat within acceptable standards.

### Model of Athletic Policy Development

A schema to develop plans and rules for athletic policy for eating disorders is presented below. It is based on conceptualizations of problem-solving. Phase 1 is Policy Formation and Phase 2 is Policy Enactment.

#### Policy Formation

**Step 1** is Identification or Problem Recognition. This consists of identification of the issue and need. A informal or formal committee of concerned individuals would be organized.

**Step 2** is Delineation or Problem Verification. This can be accomplished through Formative Evaluations (qualitative) and Health Outcome Evaluations (quantitative). Formative Evaluations are "qualitative" or more subjective methods of gathering information about the magnitude and extent of the problem through grass-roots meetings, contacts with professionals, and interactions with organizational officials and members. Professional conferences and contacts with university administrators can also serve as a means to verify the magnitude and extent of the problem.

Health Outcome Evaluations are "quantitative". Data can be collected from medical records, surveys, interview, and the research literature. Both Formative Evaluations and Health Outcome Evaluations may provide pertinent information as to the type of policy necessary.

**Step 3** is Evaluation or Assessment of the Potential for Change

regarding the ultimate likelihood of approval or enactment of a policy which governing boards would support. How much support or opposition exists? Extensive lobbying may be required depending on the stage of change to ensure that sufficient numbers of committee members support the policy.

Important elements of support are money, personnel and other resources. These need to be adequately appropriated to enact the policy after it has been approved. A policy passed but not funded is of little value.

**Step 4** is Action or Reassessment. 1. One alternative is to re-evaluate or Problem Identification. 2. Another alternative is to table the initiative until it seems more likely it will be approved by the governing body. 3. The third alternative is to Reject the initiative.

**Step 5** is to decide on the Type of Policy. There are three broad choices available. 1. Develop a policy that focuses on Information and Education. 2. A policy that stresses Contingencies and Sanctions. 3. A policy is incorporation of Information and Education policies as well as Contingencies and Sanctions.

**Step 6** is to decide on the Type of Proposal and Presentation. An initiative could be proposed in one of three ways. 1. Might be oral. 2. Another method might be a written proposal. A clear mission statement should be included along with goals, and objectives/priorities. Potential problems also should be addressed. 3. Still another method is to present the initiative both orally and in writing.

**Step 7** is Sport Establishment or Governing Body Committee Action/Decision on Policy Enactment. The possible actions are

implementation, modification, rejection, or pass along to another agency.

### Policy Enactment

**Step 1** is policy Disposition which occurs when the governing body decides on a course of action for the policy proposal. Several alternatives exist. 1. The proposed policy may be accepted and endorsed. 2. The governing body might accept the proposal but request major or minor revisions. 3. The proposal may be tabled. 4. Finally, the proposal may be rejected.

**Step 2** is Implementation which can be done in one of four ways. 1. Full scale implementation. 2. Gradual implementation in which the policy would be enacted over a period of time. 3. Partial implementation indicates only a few sports would be required to comply with the policy. 4. Small-scale or experimental implementation by selecting a representative sample of athletes across sports.

**Step 3** is the establishment of a Regulatory Body which has two primary functions. 1. These are to Monitor implementation and continuation of policies, either Information and Education and/or Contingencies and Sanctions. 2. The other function is Enforcement

**Step 4** is Verification and Evaluation. This step evaluates the outcome and impact of the policy enactment. This process could involve the recording of changes in key variables after programs or policy implementation to determine whether, after implementation, progress or modification of behavior has occurred. Formative and Health Outcome Evaluation methods could be used to compare baseline rates against current rates of anorexia and bulimia.

**Step 5** is an assessment of Policy Status. 1. Evaluation may

indicate that the policy has been effective and is ready for Final Implementation. 2. Final Implementation would continue at the current institution level and/or be Forwarded To Another Organization. 3. If necessary, Modification can occur to make it more effective. In this case, the appropriate action would be to return to Step 7. 4. Further, the policy, if it is ineffective, steps can be taken to Repeal or Revoke it.

### Discussion

Athletic policy must define precise, acceptable behaviors related to the prevention of pathogenic attitudes and behaviors and the improper use of weight loss methods. Policies must be imposed on a larger scale by organizations with governing responsibilities to affect athletic programs equitably. Education and information as well as contingency sanction and reward policy should be considered and is an important component in a comprehensive program to increase knowledge and to change unhealthy attitudes and behaviors related to eating disorders.

It should not be misconstrued that policy alone is advocated at the exclusion of treatment. Athletes with eating disorders may need professional assistance to aid them in behavior modification. The NCAA Manual recognizes "Counselling expenses related to the treatment of eating disorders". Athletic policy may be initiated at the grass-roots or the organizational level. Policy may be in the form of information and education or contingencies and sanctions. Prudent policies should promote healthy (physical, emotional, and social) athletic development and competition, resulting in enhanced performance, and further ameliorate athletic programs at the collegiate level.

### Summary

Sport has been part of the problem but can be part of the solution in dealing with eating disorders. You can help by:

1. knowing the signs, symptoms and characteristics of eating disorders, identifying the problem and referring individuals with eating disorders for professional treatment;
2. implementing prevention programs which advocate the importance of maintaining academic pursuits, hobbies and relationships outside of sport, so that the athlete's identity does not become completely immersed in or dependent upon sport performance;
3. marketing and implementing active living and weight management rather than weight reduction and stressing that being underweight, eating inappropriately and excessive exercise is equally hazardous to your health as being overweight;
4. advocating sport and/or public policy legislation which assures health and safety for children and youth involved in sport; and
5. rewarding sport agencies which promote health and sensible body image expectations and sanctioning sport organizations and representatives who precipitate and perpetuate unhealthy maladaptive behavior such as starvation and ergogenic aids.

In Canada, we spent more money on the Dubin Commission than the total cost of sending the Canadian contingent to the Seoul Olympics. Regrettably no similar efforts have been made in the eating disorder area, a medical problem with more chronicity and a higher mortality rate than that attributed to performance enhancing drugs. It is time for a complete evaluation and policy research investigation on the problem of eating disorders in Canadian and American sport, followed by appropriate legislation and prevention programs.

## REFERENCES

- American Psychiatric Association (1987) Quick Reference to the Diagnostic Criteria from DSM-III-R. Washington, DC.
- Bandura, A. (1977) Self-efficacy: toward a unifying theory of behavior change. Psychological Review, 84, 191-215.
- Black, D.R. (1991) Eating disorders among athletes: current perspective. In D.R. Black (ed.), Eating Disorders Among Athletes: Theory, Issues, and Research. American Alliance for Health, Physical Education, Recreation and Dance, Reston, Va, pp. 1-10.
- Brownell, K.D. and Rodin, J. (1992) Prevalence of eating disorders in athletes. In K.D. Brownell, J. Rodin and J.H. Wilmore (eds.), Eating, Body Weight and Performance in Athletes: Disorders of Modern Society. Lea and Febiger, Philadelphia, PA, pp. 128-145.
- Brownell, K.D., Rodin, J. and Wilmore, J.H. (1992) Eating, Body Weight and Performance in Athletes: Disorders of Modern Society. Lea and Febiger, Philadelphia, PA.
- Burckes-Miller, M. E. and Black, D. R. (1991) College athletes and eating disorders: a theoretical context. In D. R. Black (ed.), Eating Disorders Among Athletes: Theory, Issues and Research. American Alliance for Health, Physical Education, Recreation and Dance, Reston, Va, pp. 11-26.
- Burckes-Miller, M. E. and Black, D. R. (1988) Male and female college athletes: prevalence of anorexia nervosa and bulimia nervosa. Athletic Training, 23, 137-140.
- CAHPER (July/August, 1986). Special issue: eating disorders. Canadian Association for Health Physical Education and Recreation Journal.
- Carney, Barbara and translated in French by Marie Veilleux. (1986). A Preventive Curriculum for Anorexia and Bulimia. Windsor, ON: Bulimia and Anorexia Nervosa Association (BANA-Can/Am).
- Cook, P.J. (1981) The effect of liquor taxes on drinking, cirrhosis, and auto accidents. In M.H. Moore and D. R. Gerstein (eds.), Alcohol and Public Policy: Beyond the Shadow of Prohibition. National Academy Press, Washington, DC.
- Elder, J., Allen, J. and Parra-Medina, D. (1990) A compendium of effective tobacco control programs. Tobacco Control Section, California Department of Health Services.
- Farrell, S. (1989) Policy alternatives for alcohol-impaired driving. Health Education Quarterly, 16, pp. 413-427.
- Guralnik, D. B. (1987) Webster's New World Dictionary, Warner Communications Company, New York, p.522.
- Hand, C. (Producer) (1989a) Afraid to eat: eating disorders and student athletes. (Videotape). Karol Media, Wilkes-Barre, P.A.
- Hand, C. (Producer) (1989b) Out of balance: nutrition and weight. (Videotape). Karol Media, Wilkes-Barre, P.A.
- Hand, C. (Producer) (1989c) Eating disorders: what can you do? (Videotape). Karol Media, Wilkes-Barre, P.A.
- Healthy People 2000 (1991) National Health Promotion and Disease Prevention Objectives. U.S. Department of Health and Human

- Services, Washington, DC.
- Holliman, S.C. (ed.) (1991) Eating Disorders and Athletes: A Handbook for Coaches. Kendall/Hunt, Dubuque, Iowa.
- Hsu, L.K.G. (1980) Outcome of anorexia nervosa: a review of the literature (1954 to 1978). Archives of General Psychiatry, 37, 1041-1043.
- Hsu, L.K. George. (1990). Eating Disorders. New York: The Guildford Press.
- Levine, D. (1992) Jan. Image is everything. Profiles, pp. 18-21, 40-43.
- Marrazzi, M.A. & Luby, E.D. (1986). An Auto-addiction Opioid Model of Chronic Anorexia Nervosa. International Journal of Eating Disorders, 5 (2): 191-208.
- Marrazzi, M.A. & Luby, E.D. (1989). Anorexia Nervosa as an Auto-addiction-clinical and Basic Studies in Psychobiology of Human Eating Disorders. Ann. N.Y. Acad. Sci. 575: 545-547.
- Milio, N. (1981) Promoting Health Through Public Policy. F.A. Davis Company, Philadelphia, pp. 69-89.
- Moriarty, D. (1991). Athletes who 'lose' more than they win, and strategies for prevention and intervention, (with other authors) in Holliman, S. Handbook for Coaches on Eating Disorders and Athletes. Dubuque, IA: Kendall Hunt Publishing Company.
- Moriarty, Dick & Mary (Winter, 1993). The Role of Teachers and Coaches in Precipitating or Preventing Eating Disorders. CAPHER Journal 59 (4): 11-16.
- NAAS. (Oct.-Dec., 1992). Eating Disorders and Athletics. National Anorexic Aid Society Newsletter, 15 (4): 1-10.
- National Collegiate Athletic Association (NCAA). (1991). Nutrition and Eating Disorders in College Athletics. Overland Park, KS: NCAA.
- National Institute of Mental Health (1992) Anorexia nervosa and bulimia nervosa: basic brain, behavioral, and clinical studies. US Department of Health and Human Services (Pa-91-79), US Government Printing Office, Washington, D.C.
- Palumbo, D.J. (1988) Public Policy in America: Government in Action. Harcourt Brace Jovanovich, Orlando, Fl.
- Peck, R.C., Sadler, D.D. and Perrine, M.W. (1985) The comparative effectiveness of alcohol rehabilitation and licensing control action for drunk driving offenders: a review of the literature. Alcohol, Drugs, and Driving, 1, 15-39.
- Rosengren, W.R. (1980) Sociology of Medicine: Diversity, Conflict and Change. Harper and Row, New York.
- Saffer, H. and Grossman, M. (1987) Beer taxes, the legal drinking age, and youth motor vehicle fatalities.
- Skinner, B.F. (1969) Contingencies of Reinforcement: A Theoretical Analysis. Meridith Corporation, New York, pp. 1-28.
- Smith, N.J. and Worthington, Roberts, B. (1989) Food for Sport. Bull Publishing Company, Emeryville, CA.
- SNAC, (Winter, 1995). Eating Disorders and Sports. SNAC-PAC 5 (1): 1-7.
- Sundgot-Borgen, J. (1993). Nutrient Intake of Female Elite Athletes Suffering from Eating Disorders. International

Journal of Sport Nutrition. 3 (4) 431-442.

Tye, J.B., Warner, K.E. and Glantz, S.A. (1987) Tobacco advertising and consumption: evidence of a causal relationship. Journal of Public Health Policy, Winter, 492-508.

U.S. Department of Health and Human Services (1989) Reducing the Health Consequences of Smoking: 25 Years of Progress. (DHHS Publication No. CDC 89-8411). US Government Printing Office, Washington, D.C.

#### AUDIOVISUAL RESOURCES

Sport Medicine and Science Council of Canada. (November, 1990). "Desperate Measures: Eating Disorders in Athletics." VICOM. Available from SMSCC 613 748-5671.

NCAA. (1990). Nutrition and Eating Disorders "Afraid to Eat: Eating Disorders and the Student Athlete." "Out of Balance: Nutrition and Weight." "Eating Disorders: What Can You Do?" Karol Video, 350 No. Pennsylvania Ave., P.O. Box 7660. Wilkes-Barre, PA. 18773-7600.



U.S. DEPARTMENT OF EDUCATION  
Office of Educational Research and Improvement (OERI)  
Educational Resources Information Center (ERIC)



**REPRODUCTION RELEASE**  
(Specific Document)

**I. DOCUMENT IDENTIFICATION:**

Title: Canadian & American Eating Disorders and Public Policy	
Author(s): Dick & Mary Moriarty	
Corporate Source: University of Windsor SIR/CAR-BANA	Publication Date: March 23, 1997 at National AAHPERD

in St. Louis, Missouri

**II. REPRODUCTION RELEASE:**

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic/optical media, and sold through the ERIC Document Reproduction Service (EDRS) or other ERIC vendors. Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce the identified document, please CHECK ONE of the following options and sign the release below.

← Sample sticker to be affixed to document

Sample sticker to be affixed to document →

**Check here**

Permitting microfiche (4" x 6" film), paper copy, electronic, and optical media reproduction

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

\_\_\_\_\_ *Sample* \_\_\_\_\_

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Level 1

"PERMISSION TO REPRODUCE THIS MATERIAL IN OTHER THAN PAPER COPY HAS BEEN GRANTED BY

\_\_\_\_\_ *Sample* \_\_\_\_\_

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Level 2

**or here**

Permitting reproduction in other than paper copy.

**Sign Here, Please**

Documents will be processed as indicated provided reproduction quality permits. If permission to reproduce is granted, but neither box is checked, documents will be processed at Level 1.

"I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce this document as indicated above. Reproduction from the ERIC microfiche or electronic/optical media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries."	
Signature: <i>Dick &amp; Mary Moriarty</i>	Position: Professor
Printed Name: Dick & Mary Moriarty	Organization: University of Windsor
Address: 401 Sunset Ave Windsor, ON N9B 3P4	Telephone Number: (519) 253-4232
	Date: April 1, 1997

### III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, or, if you wish ERIC to cite the availability of this document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents which cannot be made available through EDRS).

Publisher/Distributor:	
Address:	
Price Per Copy:	Quantity Price:

### IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name and address of current copyright/reproduction rights holder:
Name:
Address:

### V. WHERE TO SEND THIS FORM:

Send this form to the following ERIC Clearinghouse:
<b>ERIC/CASS</b> School of Education Park 101 University of North Carolina Greensboro, NC 27412-5001

If you are making an unsolicited contribution to ERIC, you may return this form (and the document being contributed) to:

ERIC Facility  
1301 Piccard Drive, Suite 300  
Rockville, Maryland 20850-4305  
Telephone: (301) 258-5500