

AASP, Eating Disorders Special Interest Group, 2018

# Eating Disorders Among Athletes

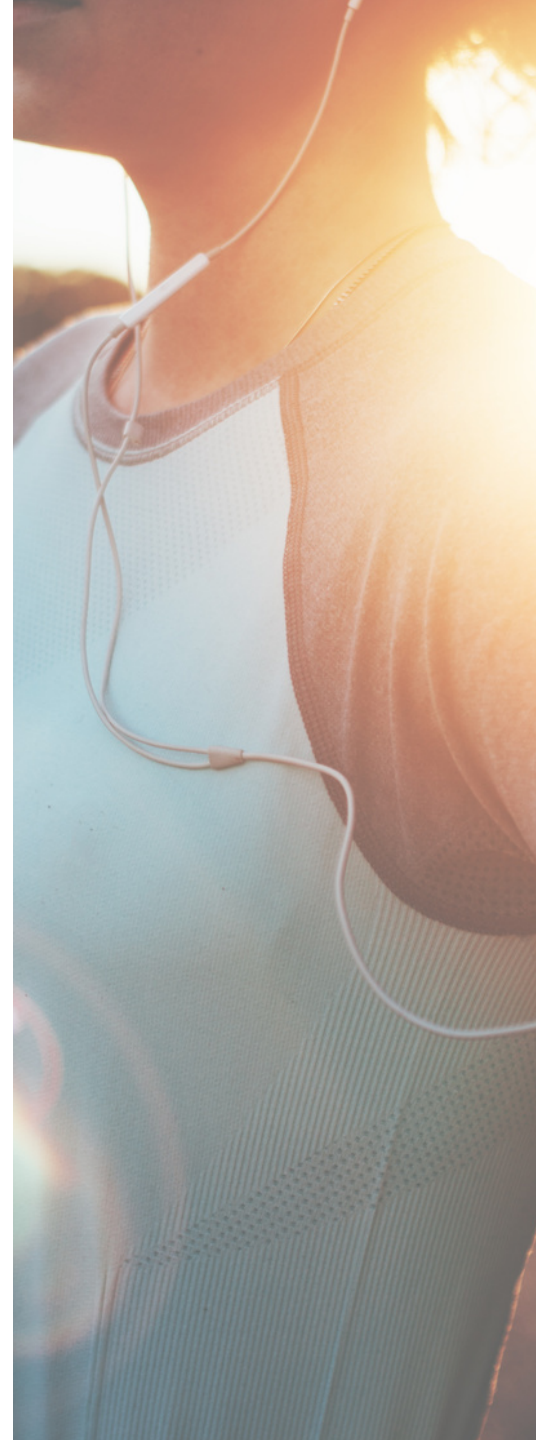
Detection & Referral Guidelines

Jenny H. Conviser, PsyD, CEDS, CMPC

Justine J. Reel, PhD, LPC, CMPC

Amanda Tierney, MS, CSCS

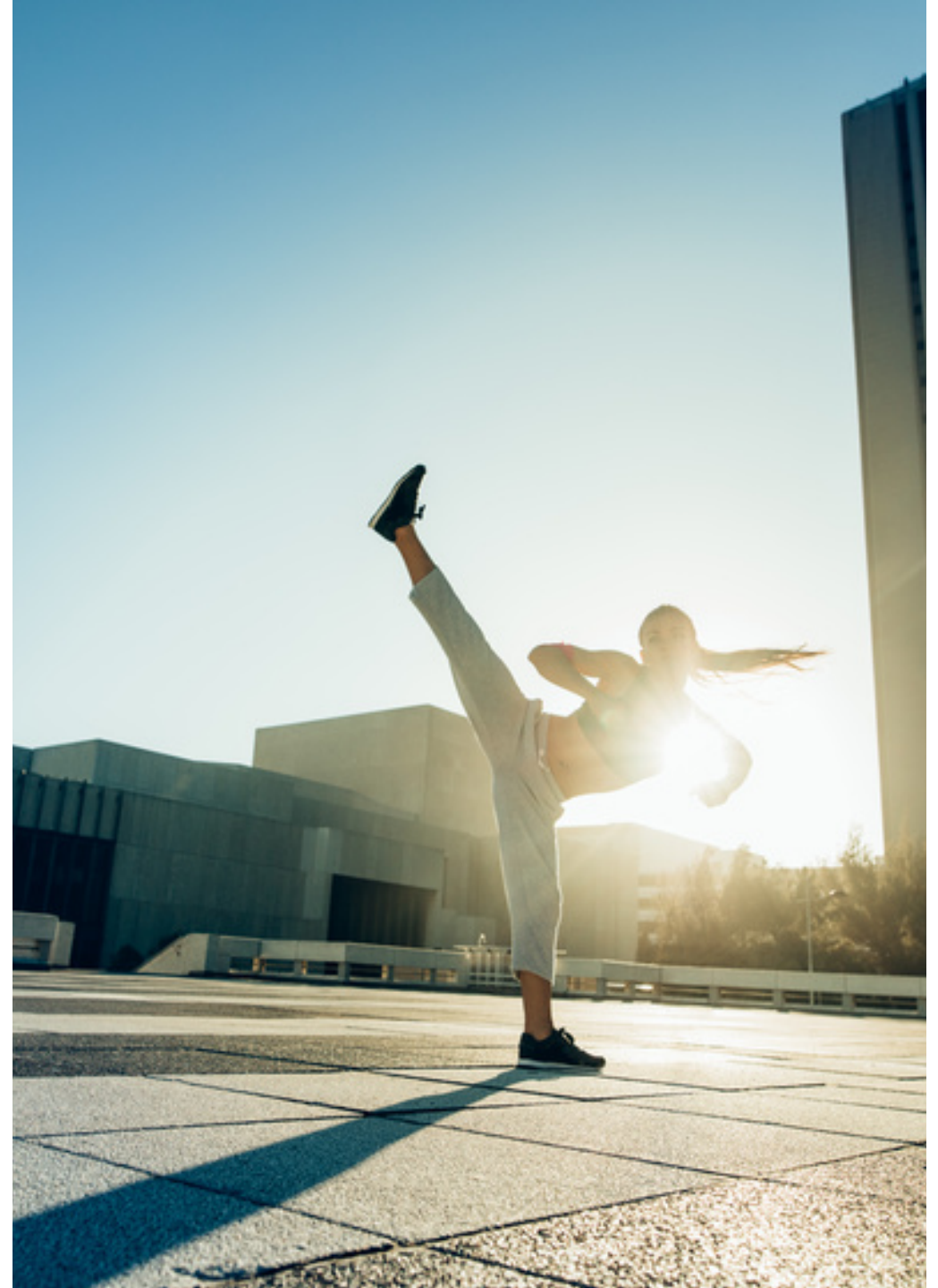
Dana K. Voelker, PhD, CMPC



# EATING DISORDERS AMONG ATHLETES

## DETECTION & REFERRAL GUIDELINES

- I. Definition, Prevalence, Etiology
- II. Health Risks, Signs, Symptoms & Early Detection
- III. **Multidisciplinary Assessment**
- IV. Managing Resistance & Motivating Recovery



Association for Applied Sport Psychology (AASP)

Eating Disorders Special Interest Group, 2018

Eating Disorders: Detection & Referral Guidelines

## **Part III**

# Multidisciplinary Eating Disorder Assessment

# Purpose

Eating disorders (EDs) are a serious mental illness posing substantial threat to mental and physical health.

Rates of EDs and subclinical disordered eating behaviors (DEBs), continue to increase across the nation and in particular among athletes.

The purpose of this presentation is to provide an overview of approaches used for the detection of EDs among athletes and referral for evaluation and/or treatment.

Vital components of effective care for athletes are summarized.

It is hoped that this summary will facilitate effective ED related assessment and referral for athletes and thereby reducing risk and improving athlete well-being.

Eating Disorders  
Assessment  
What to Expect?



# Purpose

## The purpose of an ED assessment is to:

Diagnose the ED and any other relevant conditions.

Determine severity of ED illness and identify co-occurring conditions.

Identify any immediate medical and psychological risk.

Draft goals and treatment plans for each condition identified.

Draft a schedule for additional testing, re-evaluation, monitoring & support.

Select treatment providers to manage each identified condition.

Draft initial guidelines for participation in training, practice & competition.

## Multi-Disciplinary Assessment Team

Collaborative health care providers shall include multi-disciplinary, licensed professionals with specialized training in assessment and treatment of eating disorders.

The assessment team may include, but not be limited to, the following providers:

Clinical Psychologist

Registered Dietitian

Board Certified Psychiatrist

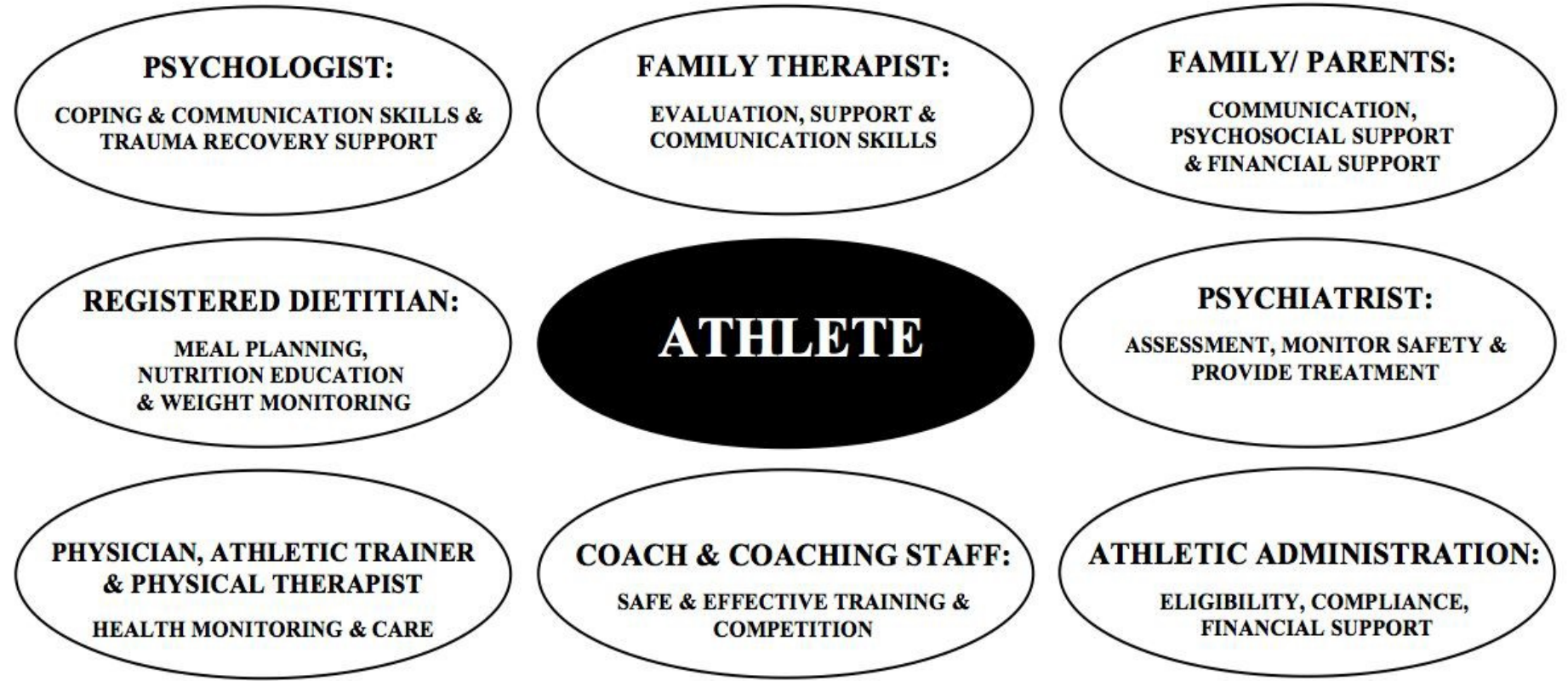
Primary Care Physician

Athletic Trainer

Athletic Department Personnel (medical director, physician, coaches, trainers, & academic staff, etc.)

Other Medical Professionals (gastroenterology, endocrinology, orthopedics, & gynecology, etc.)





**Figure 1.**

Multidisciplinary  
Treatment  
Team

Conviser, Reel & Tierney,  
2017



# Assessment

The personal interview, conducted by a licensed and appropriately credentialed professional with sport and eating disorder experienced, is an essential component of the ED assessment.

Information gathered from all members of the treatment team, is vital in accurately evaluating illness, identifying co-occurring conditions and drafting initial treatment recommendations.

# Components

## ED Assessment

**Weight Change:** rate and amount of weight change over time and especially in the past six months

**Nutritional History:** dietary intake (quantity & variety consumed, restriction of specific foods and/or food groups, food allergies, food related illnesses)

**Compensatory Behaviors:** frequency of behaviors (fasting or dieting, self-induced vomiting, exercise, laxative, diuretic or ipecac abuse, insulin misuse, use of diet pills and/or over-the-counter supplements)

**Exercise:** (frequency, intensity, duration & mode). Is exercise excessive, compulsive, rigid or used to manage weight?

**Menstrual History:** (if relevant), menarche, last menstrual period, regularity, oral contraceptive use, etc.

# Components ED Assessment

**Psychiatric History:** include symptoms of mood, anxiety, OCD, substance use disorders, self-injury

**Trauma History:** physical sexual or emotional trauma and/or chronic neglect

**Nutrition History:** dieting, food scarcity, deprivation, food allergies, food sensitivities, etc.

## **Physical Examination**

**Growth History:** (obtain grown charts when possible) consider covariance with nutrition history

**Measurement:** height, weight, and body mass index ( $BMI = \text{weight (kg)} / \text{height (m}^2\text{)}$ )

**Record:** height, weight and BMI (on grown charts for children and adolescents)

**Heart Rate & Blood Pressure:** standing, sitting & reclining

# Assessment: Relevant History

## **Current Medication:**

Include supplements, vitamins, and alternative medications (include dose amount and prescribing physicians name, address, telephone)

## **Allergies:**

Especially food related allergies or sensitivities must be medically confirmed

## **Psychosocial History:**

Social anxiety, comfort in relationships, capacity for interpersonal connection, and ability to constructively self-advocate

## **Family History:**

Include symptoms or diagnosis of ED's, obesity, mood & anxiety disorders, substance use disorders

## **Stress:**

Amount, chronicity, severity, and perceived capacity for management

## **Emotional Regulation:**

Ability to appropriately identify, express and manage a wide range of emotions

## **Financial Pressure:**

Amount, chronicity, severity and perceived capacity to cope and/or overcome financial constraints

# Assessment: Anthropometric Information

Anthropometric information may be beneficial in planning effective athletic training or rehabilitation programs, monitoring progress and even motivating exercise.

However, the same feedback may be de-motivating or even detrimental for some athletes and especially if they have a history of:

- DEBs or EDs

- Low confidence, low mood or anxiety

- Body related bullying, teasing or shaming

- History of trauma or assault

# Assessment: Anthropometric Information

Some athletes may use numeric information to prompt personal improvement:

- Constructive goal setting
- Establish reasonable expectations
- Healthy self-care

Others may use numbers in a manner that impedes success:

- Compare themselves with others
- Become self-critical
- Decreased confidence
- Lower motivation



# Assessment: Anthropometric Information



Ask each athlete, at the time of assessment, if feedback about their body weight is helpful or not helpful. Respect the athlete's preference.

It is recommended that weight and anthropomorphic information remain a private component of the athletes protected health care record (HIPPA).

Body weight should not be available to:

- Other athletes
- Sport personnel
- Media
- The public.

## Assessment: Standardized Tests

The SCOFF is a brief assessment tool used by non-professionals to assess the possible presence of an ED (Morgan, Reid, & Lacey, 2000).

The EAT-26 (Eating Attitudes Test), is a self-report questionnaire targeting ED characteristics seen among high school, college and special populations including athletes (Garner & Garfinkel, 1979).

The Eating Disorder Examination (EDE), is a semi-structured interview targeting restraint, eating concern, shape concern and weight concern and targets ED behaviors over a 28 day period (Fairburn, Cooper, & O'Conner, 2008).

The Eating Disorder Examination Questionnaire (EDE-Q) evaluates ED behaviors over a 28 day period but is a 41 item self-report questionnaire (Fairburn & Beglin, 2008).

# ED Assessment: The SCOFF

The “SCOFF” is a validated screening tool for EDs

- S- Do you make yourself **Sick** because you feel uncomfortably full?
- C- Do you worry you have lost **Control** over how much you eat?
- O- Have you recently lost more than 6.35 kg or 14 lbs. in a 3-month period?
- F- Do you believe yourself to be **Fat** when others say you are too thin?
- F- Would you say **Food** dominates your life?

\*Two or more positive responses on the SCOFF indicate a possible ED and should prompt referral for further evaluation.

Morgan, J. F., Reid, F., & Lacey, J. H. (2000). The scoff questionnaire: A new screening tool for eating disorders. *Western Journal of Medicine*, 172, 164-5.

# Assessment of Exercise

A variety of exercise assessment tools are available to evaluate the amount of exercise and motivation for exercise. These include:

CET (Compulsive Exercise Test)

CES (Commitment to Exercise)

EBQ (Exercise Beliefs Questionnaire)

REI (Reasons to Exercise)

The benefits of structured self-assessment tools include:

- 1) Ease of administration
- 2) Ease of scoring
- 3) Simplicity of comparison
- 4) Relative little expense

# Medical Evaluation

Laboratory and other diagnostic tests are necessary when evaluating an athlete who may have an ED.

Blood test results may fall within normal parameters even when a severe ED is present. Tests are commonly repeated on a schedule advised by the attending physician.

The testing schedule may be influenced by observations from any member of the evaluation or treatment teams.

Suggested laboratory tests are described on the subsequent images.

# Medical Evaluation

## Blood Tests

**Complete Blood Count:**  
leukopenia, anemia, or  
thrombocytopenia

**Comprehensive Panel:**  
Including electrolytes, liver enzymes  
& renal function

**Glucose:**  
poor nutrition

**Sodium:**  
water loading or laxatives

**Potassium:**  
vomiting, laxatives, diuretics

**Chloride:**  
vomiting, laxatives

**Blood Bicarbonate:**  
vomiting laxatives

**Blood Urea Nitrogen:**  
dehydration

**Creatinine:**  
dehydration, renal dysfunction  
& poor muscle mass

**Calcium:**  
bone loss



# Medical Evaluation

## Figure 3.

Academy of Eating Disorders:  
Guide to Medical Care, 2017

## Complete Blood Count

Leukopenia, Anemia, or Thrombocytopenia

Comprehensive panel including electrolytes, renal function & liver enzymes

Glucose, Sodium, Potassium, Chloride, Blood bicarbonate, Blood Urea,  
Nitrogen, & Creatinine

Calcium, Phosphate, Magnesium, Total Protein/Albumin, Pre-albumin

Aspartate, Aminotransaminase (AST) Alanine Aminotransaminase

Electro-cardiogram (ECG), Bradycardia, prolonged QTc (>450msec) &  
other Arrhythmias

# Medical Evaluation

## Figure 3.

Academy of Eating Disorders:  
Guide to Medical Care, 2017

## Medical Evaluation

Leptin level

Thyroid stimulating hormone (TSH) thyroxine (T4), TSH, T4

Pancreatic enzymes, (amylase and lipase), Amylase, Lipase

Gonadotropins (LH & FSH), sex steroids (estradiol & testosterone), LH, FSH

Estradiol (women) and testosterone (men)

Erythrocyte Sedimentation rate (EST)

Dual Energy X-Ray

Absorptiometry (DEXA)

## Assessment of Co-Occurring Conditions

A comprehensive ED assessment should evaluate 'co-occurring' conditions and assist the athlete in accessing appropriate treatment.

Co-occurring conditions are those that exist at the same time that the ED is present. It should **not** be assumed that ED treatment alone will sufficiently remedy all other conditions. Co-occurring conditions often require additional assessment and their own targeted treatment. Assessments conducted by a multi-disciplinary team are common features of ED assessment.

Examples of co-occurring conditions are listed below:

Depression

Sleep Disorders

Anxiety

Suicidality

History of Trauma

Alcohol Use or Abuse

History of Abuse

Substance Use or Abuse

History of Self-Injury

Medical Illnesses

Nutritional Deficiencies

Other

# Assessment Tools: Limitations

Structured self-assessment tools have limitations. Previous assessment tools targeted primarily females and diagnostic criteria which have changed over time.

Original ED assessment tools were not typically inclusive of male relevant DEBs such as; overvalued muscularity, body image disturbance in males, unhealthy or dangerous weight loss practices, and steroid use, thereby challenging the accuracy of previous epidemiological studies and disrupting accurate detection and referral procedures.

(Mitchison & Mond, 2015)

# Assessment Tools: Limitations

Athletes may be concerned about the following:

Limited privacy and confidentiality of self-assessment questionnaire results  
Knowing that test results may impact subsequent decisions regarding eligibility and sport participation

Athletes who are concerned about privacy of test results may:

Be reluctant to disclose ED signs and symptoms and the athlete's responses may be altered as a result.



## Guidelines for Treatment Decisions

Treatment typically occurs at one or more of the following levels of care:

Outpatient with individual weekly sessions

Outpatient with more intense daily treatment  
(4 to 6 hours daily, 3 to 6 days per week)

Residential or 24 hour Care

Inpatient hospitalization

Guidelines for selecting the appropriate level of care follows:



## Treatment decisions are contingent upon:

1. Assessment results
2. Severity of illness
3. Medical risk
4. Psychological risk
4. Availability of specialized care





## Treatment Decisions are also influenced by:

5. Insurance approval and authorization of services
6. Available financial resources
7. The athlete's willingness to participate at the recommended level of care
8. The family's willingness to participate at the recommended level of care








# Criteria for Hospitalization

## Figure 4. Criteria for Hospitalization

*(Presence of one or more of the following):*

- $\leq 75\%$  median BMI for age, sex and height
- Hypoglycemia
- Electrolyte disturbance (ie., hypokalemia, hyponatremia, hypophosphatemia, metabolic acidosis, or alkalosis, etc.)
- ECG abnormalities (e.g., prolonged QTc  $> 450$ , bradycardia, other arrhythmias, etc.)
- Hemodynamic instability; bradycardia, Hypotension, Hypothermia
- Orthostasis
- Acute medical complications of malnutrition (e.g., syncope, seizures, cardiac failure, Pancreatitis, etc.)
- Comorbid psychiatric or medical condition that prohibits or limits appropriate outpatient treatment (e.g., severe depression, suicidal ideation, obsessive compulsive disorder, or Type 1 Diabetes Mellitus, etc.)
- Uncertainty of the diagnosis of an ED

**Figure 5.**  
Levels of Care: Guidelines for Treatment of Eating Disorders.

Levels of Care	Medical Stability*	Suicide Risk	% of IBW** (Ideal Body Weight)	Eating Disorder Behaviors***	Motivation	Support System
<b>Inpatient</b> (Hospital Setting)	Constant Medical Supervision 	HIGH/Imminent <b>Danger to Self</b>	<85% IBW or acute weight loss due to food refusal	<b>Requires Constant Supervision</b> to interrupt identified behaviors and weight restore	<b>Very Poor to Poor</b> Uncooperative or cooperative only in highly structured setting	Lack of Adequate Support System
<b>Residential</b> (24 HR Care)	Medical Monitoring throughout the day 	HIGH <b>Danger to Self</b>	Generally <85% IBW	<b>Requires Supervision</b> to interrupt identified behaviors and weight restore	<b>Poor to Fair</b> Cooperative within structured setting	Lack of Adequate Support System
<b>Partial Hospitalization</b> (Extended Day Program)	Medically Stable 	Monitor as Needed	Generally >80% IBW	<b>Requires Structure</b> to interrupt behaviors, weight restore, and implement healthy coping skills	<b>Partially Motivated</b> Cooperative	Limited to Partial Support and Structure
<b>Intensive Outpatient</b> (Partial Day Program)	Medically Stable 	Monitor as Needed	Generally >80% IBW	<b>Uses Structure</b> to interrupt behaviors, weight restore, and implement healthy coping skills	<b>Fair</b> Cooperative	Adequate Support and Structure
<b>Outpatient</b> (Individual Appointments)	Medically Stable 	Monitor as Needed	Generally >85% IBW	Able to interrupt behaviors and implement healthy coping skills	<b>Fair to Good</b> Cooperative	Adequate Support and Structure

# EDs Detection & Referral Guidelines: Authors

## **JENNY H. CONVISER, PSYD, CEDS, CMPC**

Founder/CEO, ASCEND Consultation in Health Care, Assistant Professor, Northwestern University, 737 North Michigan Avenue, Suite 1925, Chicago, Illinois 60611, 312-283-2650 - 773-551-7746,  
[Jenny.Conviser@Ascendchc.com](mailto:Jenny.Conviser@Ascendchc.com), [J-conviser@northwestern.edu](mailto:J-conviser@northwestern.edu).

## **JUSTINE J. REEL, PHD, LPC, CMPC**

Associate Dean of Research and Innovation and Professor, College of Health & Human Services, University of North Carolina Wilmington, 601 South College Road McNeill 3024, Wilmington, NC 28403-5685,  
(910)962-7341.

## **AMANDA S. TIERNEY, MS, CSCS**

McCallum Place, The Victory Program, Director of the Victory Program, 231 W. Lockwood Ave., Suite 202,  
St. Louis, MO 63119, P: 314.968.1900, F: 314.968-1901, [www.TheVictoryProgram.com](http://www.TheVictoryProgram.com),  
[Amanda@tryteam.com](mailto:Amanda@tryteam.com).

## **DANA K. VOELKER, PHD, CMPC**

Assistant Professor, West Virginia University, College of Physical Activity & Sport Sciences, 207 Health & Education Building, PO Box 6116, 375 Birch Street, Morgantown, WV 26506, [DKVOELKER@MAIL.WVU.EDU](mailto:DKVOELKER@MAIL.WVU.EDU),  
304-293-0871.



## Additional Resources

Association of Eating Disorders: [AED.org](http://AED.org)

National Eating Disorder Association: [NEDA.org](http://NEDA.org)

International Association of Eating Disorder  
Professionals: [IAEDP.org](http://IAEDP.org)

American Psychological Association: [APA.org](http://APA.org)



# Figures

Figure 1. Multidisciplinary, Collaborative & Credentialed Treatment Team, Conviser, Reel & Tierney, 2017.

Figure 2. Medical Eating Disorder Assessment, Academy of Eating Disorders: Guide to Medical Care, 2017.

Figure 3. Basic Tests for Medical Evaluation, Academy of Eating Disorders: Guide to Medical Care, 2017.

Figure 4. Criteria for Hospitalization: Academy of Eating Disorders, Guide to Medical Care, 2017.

Figure 5. Levels of Care: Guidelines for Treatment of Patients with Eating Disorders, 3rd Edition, by K. Bennett, Yager et al., (2012) American Psychiatric Association.

# References

Fairburn, C., G., & Beglin, S. (2008). Eating disorder examination questionnaire (EDE-Q- 6.0). In Fairburn, C. G. (Ed). Cognitive Behavioral Therapy and Eating Disorders (265-308). New York: Guilford Press.

Fairburn, C., G., Cooper, Z., & O'Conner, M., E. (2008). Eating disorder examination (16.0D). In: Fairburn, C., G. editor. Cognitive Behavioral Therapy and Eating Disorders. New York: Guilford Press. 309-14.

Garner, D., M., & Garfinkel, P. E. (1979). The eating attitudes test: an index of the symptoms of anorexia nervosa. *Psychological Medicine*, 9, 273-279.

Mitchison, D., & Mond, J. (2015). Epidemiology of eating disorders, eating disordered behaviour, and body image disturbance in males: a narrative review. *Journal of Eating Disorders*, 3, 20-28.

Morgan, J. F., Reid, F., & Lacey, J. H. (2000). The scoff questionnaire: A new screening tool for eating disorders. *Western Journal of Medicine*, 172, 164-5.

Thank You for Making  
a Difference!

Association for Applied Sport Psychology (AASP)  
Eating Disorders Special Interest Group, 2018

# Eating Disorders Among Athletes

Detection & Referral Guidelines

Part III

Multi-Disciplinary Assessment

Jenny H. Conviser, PsyD, CEDS, CMPC

Justine J. Reel, PhD, LPC, CMPC

Amanda Tierney, MS, CSCS

Dana K. Voelker, PhD, CMPC

Copyright © 2018 Jenny H. Conviser. All rights reserved. United States. No part of this document may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photo copying, recording or otherwise without the prior permission of Jenny H. Conviser.

