

# THE FEMALE ATHLETE TRIAD

A HIDDEN EPIDEMIC



# What is the Female Athlete Triad ?

- ◆ Three interrelated health problems seen in females
  - Disordered eating habits
  - Amenorrhea (loss of menstrual periods)
  - Osteoporosis (bone loss)

# Disordered Eating

- ◆ A wide spectrum of harmful and often ineffective eating behaviors
- ◆ Failing to balance energy expenditures with adequate energy intake



# Disordered Eating Includes:

- Severely limiting food intake
- Constantly weighing and/or measuring food
- Secretive eating
- refusal to eat in front of others
- Counting calories and fat grams
- Abuse of laxatives
- Binging and purging



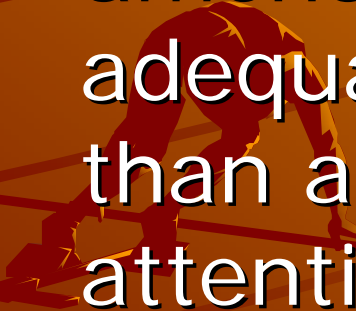
# Amenorrhea

- ◆ Menstrual disorders may be caused by failure to compensate dietary energy intake for the energy cost of exercise rather than by exercise itself
- ◆ Athletes need to practice eating patterns to attain energy intake that matches their energy expenditure

# Amenorrhea con't.

- ◆ If the athlete is not consuming enough calories to support the demands placed upon her body, her reproductive system may respond by producing less estrogen, which is a hormone needed to maintain normal monthly menstrual cycles

# Cautions:

- ◆ Athletes may welcome the convenience of not menstruating
  - ◆ Some mistakenly believe amenorrhea is an indicator of adequate training intensity rather than a symptom requiring medical attention
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# Osteoporosis

- ◆ Bone loss/weak bones
- ◆ Because of decreased hormone levels, the athlete's body will not be able to replace old bone cells with new healthy cells which puts the athlete at risk for bone density loss

# Osteoporosis con't.

- ❖ Poor eating habits will decrease levels of calcium, vitamins, and minerals the athlete is consuming, thus further affecting bone density

- ❖ Intense exercise and physical demands of her sport increase risk for stress fractures and other bone-related problems



# What are the risk factors for developing the Triad?

- ◆ Any factor that increases the likelihood of disordered eating would be considered a risk factor
  - Dieting at an early age
  - Myth that loss of weight or body fat enhances performance
  - Sport uniforms that are revealing
  - Perfectionism
  - Viewing amenorrhea, excessive exercise, and weight loss as normal

# What are the signs of the Triad?

## ◆ DISORDERED EATING:

- Restrictive dieting
- Binge eating
- Induced vomiting
- Use of laxatives
- Excessive exercise

# Signs of the Triad con't.

## ◆ PHYSICAL SIGNS:

- Noticeable weight loss
- Cold hands and feet
- Dry skin
- Hair loss
- Absent or irregular periods
- Increased rate of injury
- Delayed healing time for injuries
- Stress fractures

# Signs of the Triad con't.

## ◆ EMOTIONAL SIGNS:

- Mood changes
- Decreased ability to concentrate
- Depression



# Consequences of the Triad:

- ◆ Nutrient deficiencies and fluid/electrolyte imbalances
- ◆ Impaired performance
- ◆ Impaired growth
- ◆ Impaired mental functioning
- ◆ Increased risk of injury
- ◆ Loss of reproductive function
- ◆ Dehydration and starvation

# How is the Female Athlete Triad treated???

- ◆ Must address all possible causes of the Triad
- ◆ Requires a TEAM – physician, therapist, and nutritionist
  - Counseling
  - Education regarding eating properly for the amount of energy expended
  - Possible activity modification
  - Normal menstruation should be a goal

# How can the Triad be prevented?

- ◆ Education related to healthy eating and nutrition for athletes
- ◆ Keeping track of menstrual cycle
- ◆ Athletes should never skip meals or snacks
- ◆ Discourage “weigh-ins” and body comps
- ◆ Discuss nutritional needs in terms of health and performance

◆ Information obtained from:

The Female Athlete Triad Coalition

American College of Sports Medicine

