What Athletic Trainers Need to Know About Gynecology

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Main Topics

- Normal development and function
- Effects of exercise
- Indications for pelvic examination
- Common problems and treatments
- Which problems require interruption of training?
- Which problems do not require interruption of training?
Understanding Normal Function

- Puberty
- Menstrual Cycle
- Ovarian Cycle
- Vaginal Symptoms
- Menstrual Cramps and PMS
Normal Female Puberty

- Breast development: age 8-13
- Pubic hair: age 8-14
- Maximum growth rate: age 10-14
- First menstruation: age 9-15
Most Common Problems

- Amenorrhea and irregular periods
- Menstrual cramps
- PMS
- Ovarian cysts
- Eating disorders
- Menstrual headaches
- STDs
- Selecting contraceptive
Amenorrhea and Menstrual Irregularity

- Commonly related to exercise
- May be unrelated to exercise
- All athletes with these conditions need evaluation
- Most athletes with these conditions need hormonal treatment
Athlete #1

- 16 year old female XC runner
- Regular periods age 12 – 15.5
- Increased mileage and lost 10 lb.
- Not sexually active
- Very healthy diet but too few calories
- Ht=62 in. Wt= 105
- Normal pelvic exam
Athlete #1

Diagnosis #1: exercise amenorrhea
Treatment #1: ↑ food intake
Treatment #2: BCP or HRT
(Continue running)
Athlete #2

- 17 year old female XC athlete
- Runs 25 miles per week
- Poor diet with inadequate calories
- First period at age 15
- Only 2 periods since age 15
- 6 stress fractures during past year
- Not sexually active
- Normal pelvic exam
Athlete #2

Diagnosis #1: hypothyroidism
Diagnosis #2: low bone density
Treatment #1: thyroid hormone
Treatment #2: Birth Control Pills
Treatment #3: Calcium supplement
(continue running)
Athlete #3

- 19 year old female lacrosse player
- Regular periods until 6 months ago
- Irregular periods, then amenorrhea
- Sexually active/condom use
- 10-lb weight loss during season
- Healthy diet/adequate intake
- Normal exam
Athlete #3

Diagnosis #1: small pituitary tumor causing elevated prolactin levels

Treatment #1: bromocriptine

(Continue training)
Athlete #4

18 year old female swimmer
Irregular periods since 1st period at age 12
Mild acne + excess facial & body hair
Eats well
Not sexually active
Ht=64 in.    Wt=130 lb.
Normal pelvic exam
Athlete #4

- Diagnosis: polycystic ovarian disease
- Treatment: BCP or monthly progestin
- (continue swimming)
Athlete #5

- 29 year old female runner
- Regular periods from 1\textsuperscript{st} period at age 15 until age 27
- BCP age 23 - 27
- Healthy diet with adequate calories
- Ht=66 in.  Wt= 118 lb.
- Normal pelvic exam
Athlete #5

Diagnosis: premature ovarian failure (premature menopause)

Treatment: HRT or BCP

(continuing running)
Athlete #6

- 33 year old female marathon runner
- Regular periods age 13-19
- Regular periods on BCP (age 19-32)
- Amenorrhea after stopped BCP
- Runs 40 mi/wk & 1 marathon/yr
- Eats 2200 calories/day
- Ht=64 in   Wt=112
- Normal exam
Athlete #6

Diagnosis #1: exercise amenorrhea
Diagnosis #2: low estrogen levels
Diagnosis #3: infertility
Treatment option #1: ↓ running and/or ↑ caloric intake
Treatment option #2: HRT (Dx 1&2)
Treatment option #3: ovulation induction (Dx 3)
(continuing running)
Athlete #7

- 18 year old female swimmer
- Severe, disabling menstrual cramps with nausea, vomiting, diarrhea
- Regular, predictable menstrual periods
- Not sexually active
- Normal pelvic exam
Athlete #7

Diagnosis: Physiologic dysmenorrhea (normal menstrual cramps)

Treatment #1: ibuprofen or naproxen or diclofenac

Treatment #2: birth control pills (continue swimming)
Menstrual Cramps

- Normal condition
- Caused by prostaglandin release in uterus
- Usually easily prevented with prostaglandin inhibitors
- Birth control pills usually decrease menstrual cramps
Athlete #8

- 25 year old female volleyball player
- Regular periods since 1st period at age 13
- Severe bloating, tiredness, and sadness only before each period
- Healthy diet
- Sexually active
- Normal exam
Athlete #8

Diagnosis: Premenstrual syndrome (PMS)

Treatment #1: Yasmin

Treatment #2: Sarafem (if needed)

(continue training)
Athlete #9

- 15 year old female XC runner
- Pelvic pain while running before periods
- Family history of endometriosis
- Ultrasound: ovarian cyst (1 cm)
- Normal pelvic exam
Athlete #9

Diagnosis #1: normal ovarian follicle (cyst)
Diagnosis #2: unexplained premenstrual pain during running
Treatment option #1: Vary training to determine best ways to avoid pain
Treatment option #2: BCP trial
(Continue running)
Athlete #10

16 year old female runner
First period at age 14
Very infrequent periods, then amenorrhea
Ht=65 in. Wt= 100 lb.
Eats very little
Tries to remain thin in order to remain competitive as runner
Normal exam
Athlete #10

Dx #1: Amenorrhea/low estrogen
Diagnosis #2: eating disorder
Diagnosis #3: low bone density
Rx #1: Psych. care (involve coach)
Rx #2: BCP or HRT
Rx #3: ↑ food intake
   (interrupt training/limit running)
Athlete #11

- 21 year old female basketball player
- Menstrual headaches
- Regular menstrual periods
- Not sexually active
- Normal exam
Athlete #11

Diagnosis: Menstrual headaches

Treatment option #1: Mircette

Treatment option #2: low-dose estrogen patch during week of period

Treatment option #3: #1 and #2

(continue training)
Athlete #12

- 22 year old female runner with severe vulvar pain and swelling
- Regular periods
- Recent oro-genital sexual activity
- Pelvic exam: Marked vulvar swelling and tenderness and open blisters
Athlete #12

- **Diagnosis:** Genital herpes
- **Treatment #1:** Valtrex
- **Treatment #2:** Topical anesthetic
- (interrupt training until symptoms resolve)
Athlete #13

- 20 year old female soccer player
- Recent onset of severe pelvic pain at end of last menstrual period
- Regular periods
- Sexually active
- Taking BCPs
- Pelvic exam: Cervical discharge and pelvic tenderness
Athlete #13

Diagnosis: Acute gonorrhea

Treatment #1: Cipro

Treatment #2: Partner needs treatment also

(interrupt training until symptoms resolve)
Sexually Transmitted Diseases

- All sexually active women should be screened for STDs
- All sexually active women should be counseled about STD prevention
Selecting a Contraceptive

- Birth Control Pills
- Contraceptive patch
- Contraceptive vaginal ring
- Condoms
- Diaphragm
- IUD
Birth Control Pills for Athletes

- Avoid weight gain
- Avoid mood changes
- Avoid menstrual cramps and headaches
- Avoid break-through bleeding
- Have regular, predictable periods
- Replace deficient hormones
Choosing the Best BCP for Each Athlete

- If no symptoms prior: Alesse
- If acne prior: Yasmin, Estrostep, or Ortho-Tricyclen
- If moody prior: Alesse, Yasmin, or Estrostep
- If cramps prior: Alesse
- If headaches prior: Mircette
- If breakthrough bleeding on BCP: Ovcon
Indications for a Pelvic Exam

- Age 18
- Sexual activity
- Pelvic or vulvovaginal pain
- Vulvovaginal itching or discharge
- Menstrual irregularity or amenorrhea
- Precocious or delayed puberty
- STD exposure
When to Interrupt Training

- Too much pain to exercise
- Eating disorder or other disorder with excessive thinness
- Pregnancy (consult obstetrician for specific advice)
Conclusions

- Encourage all athletes to get routine GYN care
- Encourage athletes to seek evaluation for all GYN problems
- Encourage compliance with therapy
- Encourage BCP, condoms, and healthy diet
- Rarely need to interrupt training