



Optimizing Health and Athletic Performance for Women

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1330 – 1430 ET

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Celina de Borja, M.D. is a pediatrician with special training in sports medicine who cares for children and young adults with a wide variety of musculoskeletal conditions. She completed her pediatric residency through Hackensack Meridian Health at Jersey Shore University Medical Center, then completed a fellowship in sports medicine through Harvard Medical School at Boston Children's Hospital. During her fellowship in Boston, Dr. de Borja served as team physician for the women's field hockey and basketball teams at Northeastern University and for the football team at Newton South High School; she was also a consulting physician for Boston Ballet School and Boston Conservatory at Berklee College of Music. At UCSF, she has been an active medical volunteer with RunSafe and PlaySafe programs, serving at various sporting events in the Bay Area.

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Disclosure

- Dr. de Borja and Dr. Watkins have no relevant financial or non-financial relationships to disclose relating to the content of this activity.
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Optimizing Health and Athletic Performance for Women

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Learning Objectives

At the conclusion of this activity, participants will be able to:

1. Discuss techniques to tailor **injury prevention** to high-risk areas for female athletes.
2. Describe strategies to **optimize the performance** of female athletes.
3. Explain ways to **optimize the workforce** to care for female athletes.

Journey of Women in Olympic Sport



- International Olympic Committee (IOC) expansion to include women events
- Title IX



Title IX

“No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance.”

Women in Collegiate Athletics

- 43.7% of collegiate athletes across all division levels
 - Increased from 15% in 1972
- 48.2% of NCAA division one power five conference athletes
- Increased female athletic administrators, coaching and athletic training staff



(Bell, 2008)

Women in High School Athletics

- Increased from 295,000 in 1971 to 2.8 million in 2003
 - Over 840% increase



(Bell, 2008)

Injury Prevention for Women in Sport

Objective One:

Injury Prevention:

- **Growth and development**
- Knee Injuries
- Concussion
- Bone Stress Injuries
- Sexual Violence in Sport

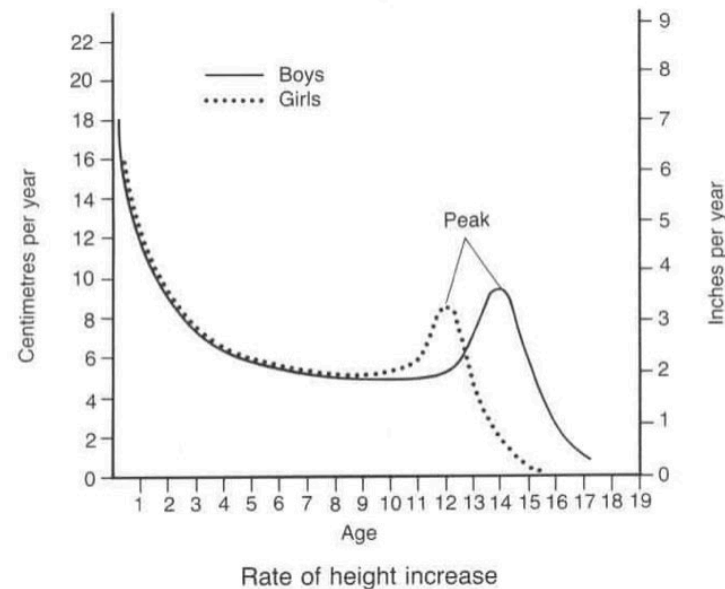
Growth & Developmental Considerations

- Boys develop greater shoulder width and muscle mass, girls gain hip width and fat mass
 - ↑ risk for anterior cruciate ligament (ACL) injuries
- Female athletes gain more body fat, less lean muscle mass than males during puberty
 - ↑ risk for disordered eating, overtraining, relative energy deficiency in sport (RED-S)
- Girls tend to have greater ligamentous and joint laxity than boys
 - ↑ risk for ligamentous injury such as ankle sprains

Growth & Developmental Considerations

Prevention

- Increased awareness of these risks
- Increased focus on neuromuscular training during female growth spurt



Objective One:

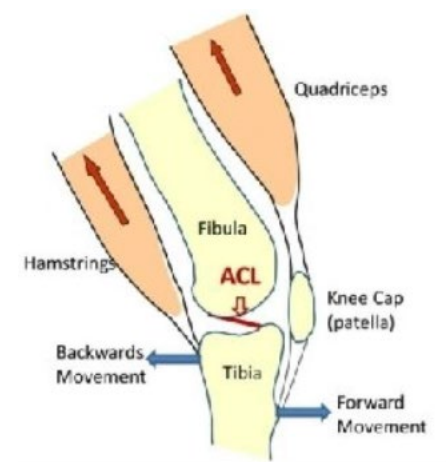
Injury Prevention:

- Growth and development
- **Knee Injuries**
- Concussion
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- Sexual Violence in Sport

Knee Injuries

ACL injuries

- Female athletes are at increased risk of ACL tears from noncontact mechanisms especially after puberty
 - Also have a higher risk of subsequent contralateral ACL injury
-
- Increased Q angle
 - Narrow intercondylar notch
 - Increase in posterior tibial slope
 - Quadriceps-to-hamstring ratio
 - Hormonal
 - Neuromuscular



Knee Injuries

ACL Injury Prevention

- Programs that focus on biomechanical & neuromuscular factors such as
 - Competence in landing and cutting positions (e.g. box drop and landing)
 - Hip and core strengthening (e.g., single-leg squat)
- Prevention programs initiated during pre-season & continued into the sports season as part of the athlete's warmup exercises



Knee Injuries

Patellofemoral Pain Syndrome (PFPS)

- Patellofemoral pain syndrome more commonly affects adolescent female athletes vs. males
 - Patella alta
 - Trochlear dysplasia
 - Increased Q angle
 - Valgus lower extremity alignment
 - Poor neuromuscular control

Knee Injuries

Prevention

- Identify and educate on risk factors
- Develop strength & conditioning programs
- Neuromuscular training programs
 - Dynamic stretching, strengthening, functional balance, agility & plyometric exercises
 - Preseason protocol >10 min, 3x/week for ≥ 8 wk ---> most effective, continued in-season during warm-up

Objective One:

Injury Prevention:

- Growth and development
- Knee Injuries
- **Concussion**
- Bone Stress Injuries
- Sexual Violence in Sport

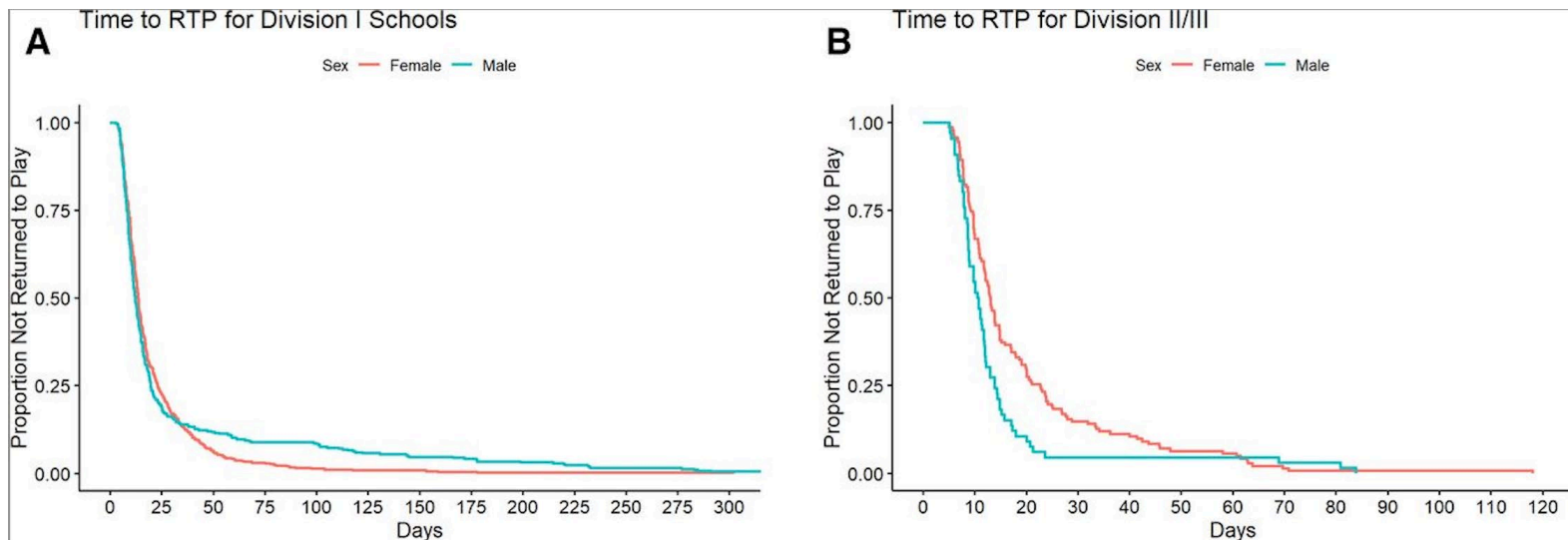
Concussion

- Higher rates of concussions in female athletes vs. male athletes in sports with the same rules
- Females have more symptoms, longer recovery times, and suffer worse outcomes
 - Decreased neck strength/stability
 - Hormonal fluctuations
 - Greater incidence of pre-existing conditions
- Remains unclear if female athletes actually have worse initial outcomes or slower recovery

Concussion

Master et al 2020

- Prospective study of concussion in collegiate athletes
- No overall difference in concussion recovery between male and female Division I athletes
- Female Division II/III athletes had longer recovery



(Master et al., 2020)

Concussion

Concussion injury reduction strategies:

- Educational programs that focus on risk awareness and reporting of symptoms
- Neck strengthening exercises, technique modifications (e.g., tackling and checking)
- Enforcement of existing rules or game rule changes
- Timely access to specialists, physicians, athletic trainers

Objective One:

Injury Prevention:

- Growth and development
- Knee Injuries
- Concussion
- **Bone Stress Injuries**
- Sexual Violence in Sport

Bone Stress Injuries

- More prevalent in females than males
 - Extrinsic (exercise volume, type, or intensity)
 - Intrinsic (biomechanics, muscle strength, balance, and limb alignment)
 - Medical/psychologic (poor nutrition, eating disorder/disordered eating, low energy availability, menstrual dysfunction, low bone mineral density)

Bone Stress Injuries

Prevention

- Screening for risk factors, especially eating disorders/disordered eating (ED/DE), low energy availability (EA), menstrual dysfunction and low bone mineral density
- Multidisciplinary team evaluation and management for those with medical/psychological cause
- Progressive resistance training

Objective One:

Injury prevention:

- Growth and development
- Knee Injuries
- Concussion
- Bone Stress Injuries
- **Sexual Violence in Sport**

Sexual Violence in Sport

- Female athletes thought to be at increased risk compared to males

Risk highest for:

- Elite, LGBTQ and disabled athletes
- Athletes in sports where there is early specialization
- Sports where intensive talent identification occurs around puberty

Sexual Violence in Sport

Prevention

- Training on the prevention and identification of sexual violence for athletes, coaches & administrators
- Team physician should collaborate with coaching and sports organizations on policies and procedures for prevention
 - never be alone in a room with an athlete or share a hotel room at an event
 - never drive an athlete home after practice
 - avoid seeing an athlete socially

Optimizing Performance of the Female athlete

Objective Two:

Performance Optimization:

- **Menstrual Cycle**
- Oral Contraceptive Pill (OCPs)
- Pregnancy and Post-partum
- Breast Mechanics
- Strength and Conditioning

Menstrual Cycle and Performance

- Estrogen promotes muscle strength
- Loss of estrogen leads to muscle weakness
- Post- menopausal women on estrogen hormone therapy had 5% greater strength than those women who did not
 - result of improved muscle function rather than muscle hypertrophy

Mechanisms Behind Estrogen's Beneficial Effect on Muscle Strength in Females

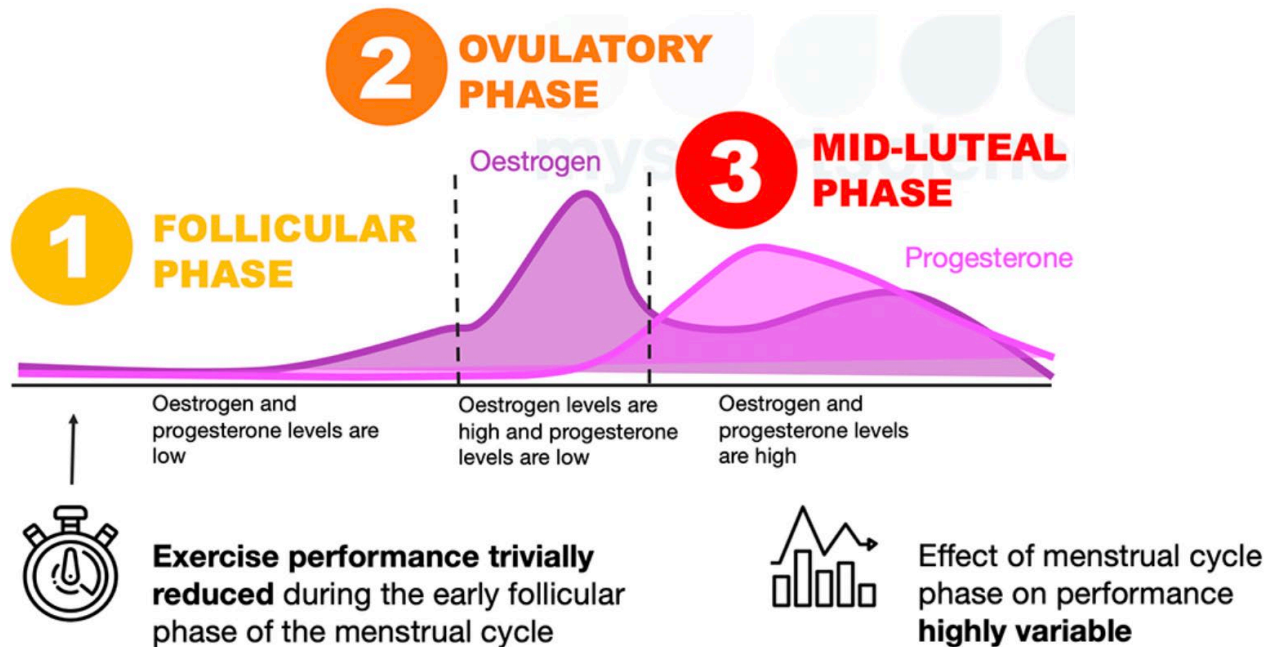
Lowe, Dawn A.¹; Baltgalvis, Kristen A.²; Greising, Sarah M.¹

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Exercise and Sport Sciences Reviews: April 2010 - Volume 38 - Issue 2 - p 61-67
doi: 10.1097/JES.0b013e3181d496bc

Menstrual Cycle and Performance

Menstrual cycle and performance



Menstrual Cycle and Performance

McNulty et al 2020

- Meta-analysis of exercise performance across the different phases of the menstrual cycle
- Very small effect size with reduced performance in the early follicular phase of the menstrual cycle
- Concluded that this was a trivial reduction but may be important for elite athletes
- Providers working with elite athletes should be aware that performance might be reduced during the early follicular phase compared to all other phases

Objective Two:

Performance Optimization:

- Menstrual Cycle
- **OCPs**
- Pregnancy and Post-partum
- Breast Mechanics
- Strength and Conditioning

OCPs Use in Female Athletes

- Up to 57% of female college athletes take combined estrogen-progestin oral contraceptives (COCs)
- Benefits include:
 - regulation of menstrual bleeding
 - decreased menstrual blood loss
 - improvement in iron deficiency anemia related to blood loss
 - decreased dysmenorrhea
 - reduced symptoms of premenstrual syndrome and premenstrual dysphoric disorder
 - reduced risk of benign breast disease

OCPs and Exercise Performance

Effect of OCPs on exercise performance is unclear

Elliott-Sale et al. 2020

- Meta-analysis of 42 studies and 590 participants
- Evaluated the effect of OCPs on athletic performance
- Athletes on OCPs had a slight exercise performance deficit
 - Group-level effect is most likely trivial
 - Relatively large study design variance

OCPs and Exercise Performance

Recommendations

- Negative effect of OCPs on exercise performance is likely insignificant for the majority of athletes
- Clinicians should take an individualized approach when counseling female athletes on OCP use
- State of the existing data does not allow for more generalized guidance

Objective Two:

Performance Optimization:

- Menstrual Cycle
- OCPs
- **Pregnancy and Post-partum**
- Breast Mechanics
- Strength and Conditioning

Pregnant/Post Partum Athlete and Sports Performance

- Maintenance of regular exercise is important in optimizing athletic performance for the pregnant and postpartum athlete
- Regular physical activity during pregnancy and the postnatal period reduces the risk of developing depression
- Aerobic exercise for 30–60 min, 2-7x/week during pregnancy associated with reduced risk of gestational hypertension, gestational diabetes & cesarean delivery

Pregnant/Post Partum Athlete and Sports Performance

Urinary Incontinence

- Stress urinary incontinence has been reported in a large variety of sports
- Can interfere with training and compromise athletic performance
- Regular exercisers at mid-pregnancy have stronger pelvic floor muscles than their sedentary peers
- Pelvic floor muscle strength is associated with urinary continence

Pregnant/Post Partum Athlete and Sports Performance

Back Pain

- Pregnancy-related low back pain prevalence of 20 to 84%
- Can continue post delivery in 50% of women at one year & 20% at three years
- Kinesiotape /similar drug-free elastic tapes can reduce pain intensity and disability



Objective Two:

Performance Optimization:

- Menstrual Cycle
- OCPs
- Pregnancy and Post-partum
- **Breast Mechanics**
- Strength and Conditioning

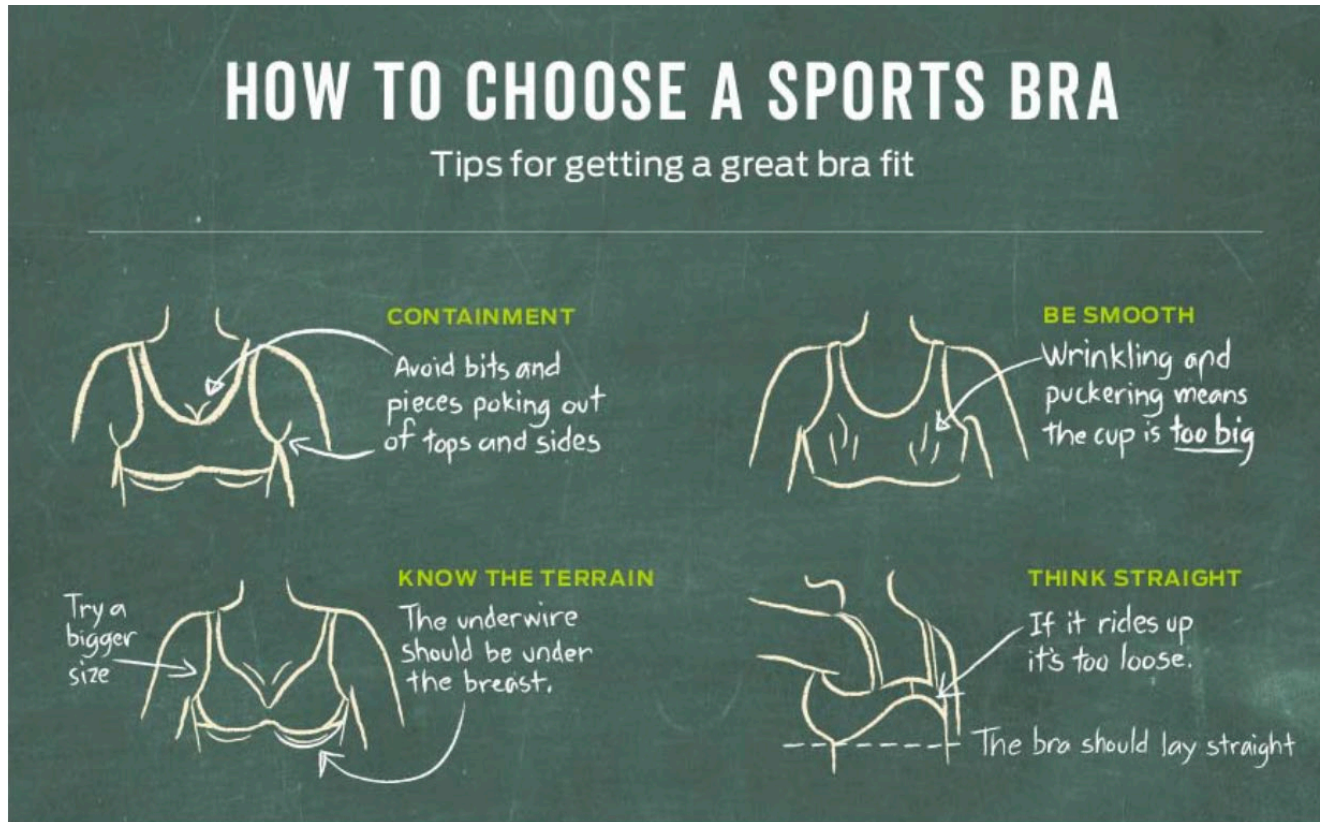
Breast Mechanics and Performance

- Physical activity decreases in females as breast size increases
 - 17% of women reported that the breast was a barrier to physical activity
- Barriers to activity:
 - Embarrassment about their breast motion
 - Inability to find the right sports bra

Sports Bra and Performance

- Exercise-induced breast pain thought to be from the breasts hitting the torso with foot strike when running
- Correctly fitting bra can reduce exercise-related breast pain, neck and back pain

Recommended Sports Bra?



Objective Two:

Performance Optimization:

- Menstrual Cycle
- OCPs
- Pregnancy and Post-partum
- Breast Mechanics
- **Strength and Conditioning**

Strength & Conditioning and Performance

- Optimizes athletic performance & decreases injury risk in athletes
- Female athletes benefit the most if **incorporated before the onset of puberty**
 - This timing most effectively builds muscle mass
- Female athletes have less access to these programs
 - Due to both personal barriers, fear of “bulking up” & systemic barriers wherein females are not challenged to work as hard

Strength & Conditioning and Performance

- Meta-analysis of resistance training in youth athletes:
 - Male and female youth athletes show similar gains in muscle strength and vertical jump performance
 - **Girls** had significantly **larger sport-specific performance improvement**

Strength & Conditioning (S&C) and Performance

- Study of S&C programs among varsity high school athletes
 - Only 17% of female athletes required to participate year-round compared to 50% of male athletes
 - Coaches of female athletes were less likely to know the credentials of their strength coaches
 - Less likely to use certified coaches

Optimizing Workforce to Care for Female Athletes

Gender Equity in the Team Physician Workforce

- Gender equity is important in medicine:
 - Allows women equal professional opportunities as men
 - Promotes diversity
 - May also play a role in quality of care

Gender Equity in the Team Physician Workforce

- When patients better identify with their physician based on sex or ethnicity, they demonstrate:
 - Greater trust
 - Better outcomes
 - Improved communication and compliance

Gender Equity in the Team Physician Workforce

- Women physicians are more likely than men physicians to:
 - Engage in more patient-centered communication
 - Be less paternalistic
 - Be more autonomy respecting

Gender Equity Important in the Team Physician Workforce

- Holschen and Singal 2006
 - 204 individuals surveyed
 - When a sex organ examination was involved, they preferred a same-sex provider (p , 0.0001)
 - Women had greater preference for a same-sex physician for questions about sex, birth control, acne, diet, relationships, and for psychiatric problems (p , 0.005)

Will they avoid seeking care if they do not have access?

Gender Equity in the Team Physician Workforce

Questionnaire Items	% Male Respondents	% Female Respondents
Have a male family doctor	82.7	46.9
Have a female family doctor	10.2	48.4
Do not have a family doctor	4.7	4.7
Have a male team doctor	11.3	3.5
Have a female team doctor	88.7	96.5
No prior experience with team doctor of opposite sex	58.2	73.1
Comfortable with MD of opposite sex for general health issues	93.9	82.8
Comfortable with MD of opposite sex for sexual health issues	75.5	51.6
Comfortable with team doctor of opposite sex in dressing room	68.1	67.8
Prefer a male team doctor	26.5	0
Prefer a female team doctor	28.6	48.4
No preference for gender of team doctor	44.9	51.6
Physician qualification more important than gender	96.9	100
Gender does not influence trust	97.9	92.1
Female MD more sympathetic and caring	55.1	40.3
Male MD more sympathetic and caring	8.2	0
Neither gender MD more sympathetic and caring than other	36.7	59.7

[Athletes' Preference for Gender of Team Physician](#)

Wesner, Marni L; Vallance, Jeffrey
 Clinical Journal of Sport
 Medicine 17(2):143-144, March 2007.
 doi: 10.1097/JSM.0b013e31802b4fa6

Frequencies of Male and Female Respondents Preferences

Current State of the Sports Medicine Physician Workforce

- Women are underrepresented in Sports Medicine
- 2019–2020 American Medical Society for Sports Medicine (AMSSM) report: females comprise 28% of total members (1154/4122)
- American Orthopaedic Society for Sports Medicine (AOSSM): female orthopedic surgeons comprised 6.5% of members (239/3668)

Current State of the Sports Medicine Physician Workforce

- Women are underrepresented among residency program directors and on editorial boards of medical journals
- Women are less likely to become team physician, take on leadership roles

Women in Sports Medicine

Women comprise:

- 12.7% of all team physicians
- 18.1% at the collegiate level
- 6.7% at the professional level
- Highest representation for female team physicians (31.3%) in Women's National Basketball Association (WNBA) and National Women's Soccer League (NWSL) (~33% based on verbal correspondence)

Collegiate Team Physicians

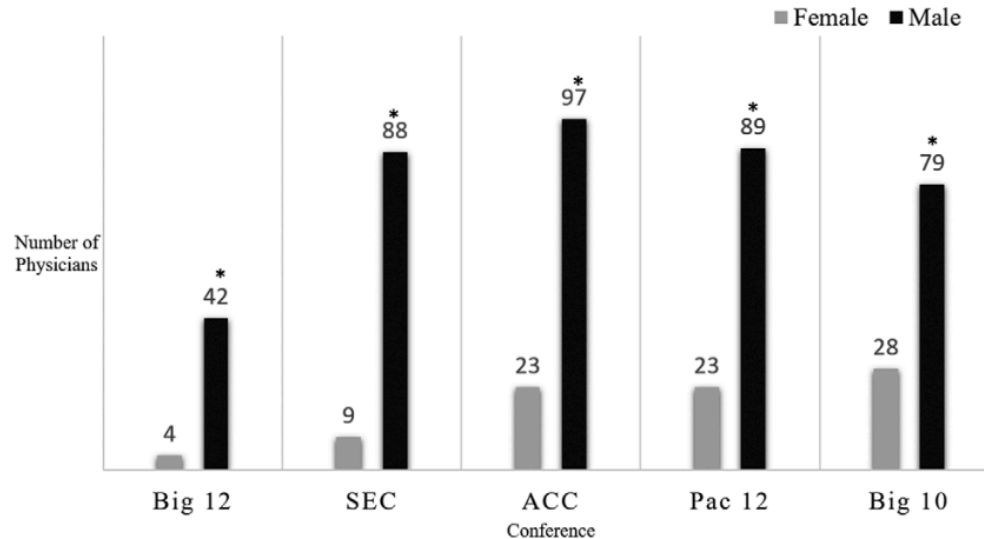


Figure 1. Sex-based representation of team physicians in select National Collegiate Athletic Association (NCAA) conferences. *Statistically significant ($P < .05$). ACC, Atlantic Coast Conference; PAC-12, Pacific-12 Conference; SEC, Southeastern Conference.

Professional Team Physicians

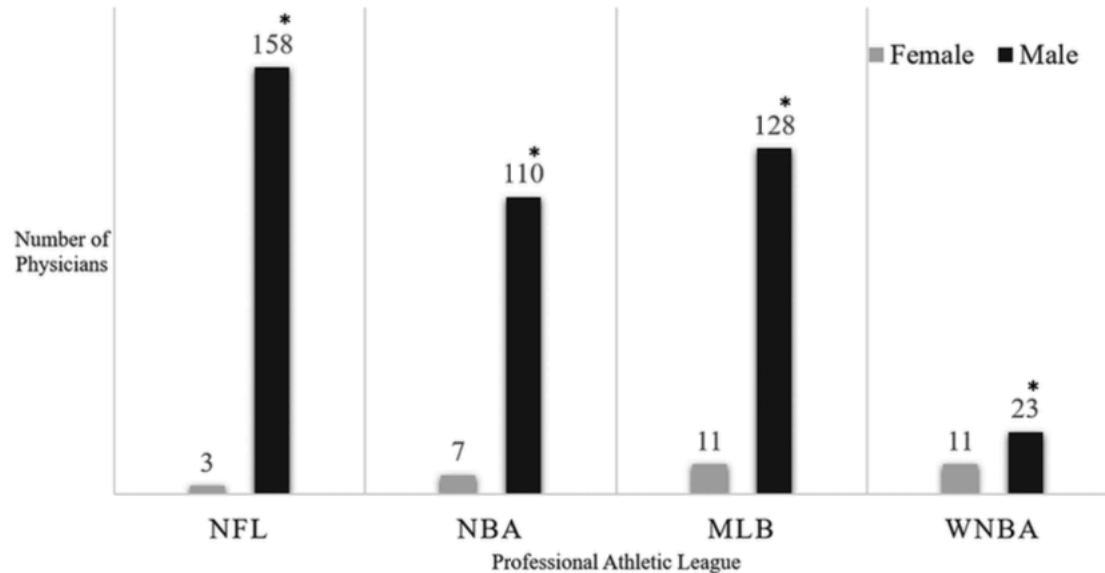


Figure 2. Sex-based representation of team physicians in select professional leagues. *Statistically significant ($P < .05$). MLB, Major League Baseball; NBA, National Basketball Association; NFL, National Football League; WNBA, Women’s National Basketball Association.

Challenges for Women in Sports Medicine Leadership

- The association of leadership with masculine qualities
- Lack of affirmation of feminine leadership traits and resulting lack of self-identification as a leader
- Barriers in the career progression pipeline

Challenges for Women in Sports Medicine Leadership

- Lack of diversity in selection panels
- The “double bind” (where women are expected to demonstrate masculine traits but then criticized for doing so)
- Persisting cultural norms (career vs family)

Recommendations for increasing Gender Equity in Sports Medicine

- Gender equity training for all providers
- Sports medicine/team physician pipeline programs
- Develop strategies to retain female physicians
 - Transparency in pay scale and promotion criteria
 - Training on leadership development, contract and salary negotiations, career advancement strategies
 - Increased same sex mentorship pairings

Recommendations for increasing Gender Equity in Sports Medicine

- Administrative support for team physicians
- Advocate to expand the number of topics relevant to women athletes at conferences
- Advocate to expand the number of publications authored by women in sports medicine journals

Summary

Key Takeaways

- Exponential growth in women participating in competitive sports throughout the years
- Women physicians are still underrepresented in fields that care for elite athletes
- Team physicians must understand the physiologic, biomechanical & anatomic factors unique to female athletes in order to tailor injury prevention programs and optimize their athletic performance
- Advocating for gender equity in sports medicine to advance representation of women in the field will increase workforce diversity and promote excellence in sports medicine care

References

- Alsan, M, Garrick, O, & Graziani, G. (2019). Does diversity matter for health? Experimental Evidence from Oakland. *American Economic Review*, 109(12), 4071–111. <https://doi.org/10.1257/aer.20181446>.
- Bø, K., Ellstrøm Engh, M., & Hilde, G. (2018). Regular exercisers have stronger pelvic floor muscles than nonregular exercisers at midpregnancy. *American Journal of Obstetrics and Gynecology*. 218(4), 427.e1–5. <https://doi.org/10.1016/j.ajog.2017.12.220>
- Bell, R. (2008). Academy USS. A history of women in sport prior to title IX. *Sport Journal*, 2008, 22, 1543–9518. <https://thesportjournal.org/article/a-history-of-women-in-sport-prior-to-title-ix/>
- De Borja, C., Chang, C.J., Watkins, R. et al. (2022). Optimizing Health and Athletic Performance for Women. *Current Review of Musculoskeletal Medicine*, 15, 10–20. <https://doi.org/10.1007/s12178-021-09735-2>
- Elliott-Sale, K.J., McNulty, K.L., Ansdell, P., & et al. (2020). The effects of oral contraceptives on exercise performance in women: a systematic review and meta-analysis. *Sport Med*, 50(10), 1785–812. <https://doi.org/10.1007/s40279-020-01317-5>
- Female Athlete Issues for the Team Physician: A Consensus Statement—2017 Update, *Current Sports Medicine Reports*: May 2018 - Volume 17 - Issue 5 - p 163-171 <https://doi.org.10.1249/JSR.0000000000000482>
- Holschen, J.C., Singal, B.M. (2006). College athletes' preference of physician gender. *Clinical Journal of Sport Medicine*. 2006, 16(5), 440–1. <https://doi.org/10.1097/01.jsm.0000244600.23472.88>
- International Olympic Committee. (2019). Key dates in the history of women in the Olympic Movement. *International Olympic Committee*. <https://www.olympic.org/women-in-sport/background/key-dates>
- International Olympic Committee. (2019). Key dates in the history of women in the Olympic Movement. *International Olympic Committee*, <https://www.olympic.org/women-in-sport/background/key-dates>
- Kaplan, Ş., Alpayci, M., Karaman, E., & et al. (2016). Short-term effects of kinesio taping in women with pregnancy-related low back pain: a randomized controlled clinical trial. *Medical Science Monitor*, 22: 1297–301. <https://doi.org/10.12659/MSM.898353>

References

- Lynöe, N., Juth, N., & Helgesson, G. (2010). How to reveal disguised paternalism. *Medicine, Health Care and Philosophy*. 13(1), 59–65. <https://doi.org/10.1007/s11019-009-9218-7>
- Marks, S., Mountjoy, M., & Marcus, M. (2012). Sexual harassment and abuse in sport: the role of the team doctor. *British Journal of Sports Medicine*, 46:905–8. <https://doi.org/10.1136/bjsports-2011-090345>
- McNulty, K.L., Elliott-Sale, K.J., Dolan, E., & et al. (2020). The effects of menstrual cycle phase on exercise performance in eumenorrheic women: a systematic review and meta-analysis. *Sport Med*. 50(10): 1813–27. <https://doi.org/10.1007/s40279-020-01319-3>
- Marks, S., Mountjoy, M., & Marcus, M. (2012). Sexual harassment and abuse in sport: the role of the team doctor. *British Journal of Sports Medicine*, 46:905–8. <https://doi.org/10.1136/bjsports-2011-090345>
- Noon, M.L., & Hoch, A.Z. (2012). Challenges of the pregnant athlete and low back pain. *Current Sports Medicine Report*;11(1), 43–8. <https://doi.org/10.1249/JSR.0b013e31824330b6>
- O'Reilly, O.C., Day, M.A., Cates, W.T., Baron, J.E., Glass, N.A., & Westermann, R.W. (2020). Female Team Physician Representation in Professional and Collegiate Athletics. *The American Journal of Sports Medicine*, 48(3), 739-743. <https://doi.org/10.1177/0363546519897039>
- Roter DL, Hall JA. Physician gender and patient-centered communication: a critical review of empirical research. *Annu Rev Public Health*. 2004;25:497–519. <https://doi.org/10.1146/annurev.publhealth.25.101802.123134>
- U.S. Department of Education. (2021). *Title IX and Sex Discrimination*. https://www2.ed.gov/about/offices/list/ocr/docs/tix_dis.html#:~:text=Title%20IX%20states%3A,activity%20receiving%20Federal%20financial%20assistance.
- Verrilli, L.E., Landry, M., & Blanchard, H. (2017). Contraceptive choices and menstrual patterns in high level female athletes. *Fertility & Sterility*, 108(3):e122. <https://doi.org/10.1016/j.fertnstert.2017.07.374>
- Wesner, M.L., & Vallance, J. (2007). Athletes' preference for gender of team physician. *Clinical Journal of Sport Medicine*, 17(2), 143–4. <https://doi.org/10.1097/JSM.0b013e31802b4fa6>

Thank You!

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