

Marian High School



OPTIMIZED STRENGTH & CONDITIONING FOR HIGH SCHOOL FEMALE ATHLETES

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Optimized Training for
Female Athletes



GENERAL PRINCIPLES OF S&C FOR FEMALE ATHLETES

Dan John's Simple Strength

"Simplicity + Consistency = Results"

Multilateral Development

Include a mix of resistance training, plyometrics, speed, agility, and flexibility exercises (Behm et al., 2008).



Progressive Overload

Training programs must gradually increase in intensity, volume, or complexity to stimulate adaptation (Faigenbaum et al., 2009).



Neuromuscular Development:

Emphasize motor control, proprioception, and agility to reduce injury risk and improve movement efficiency (Myer et al., 2013).

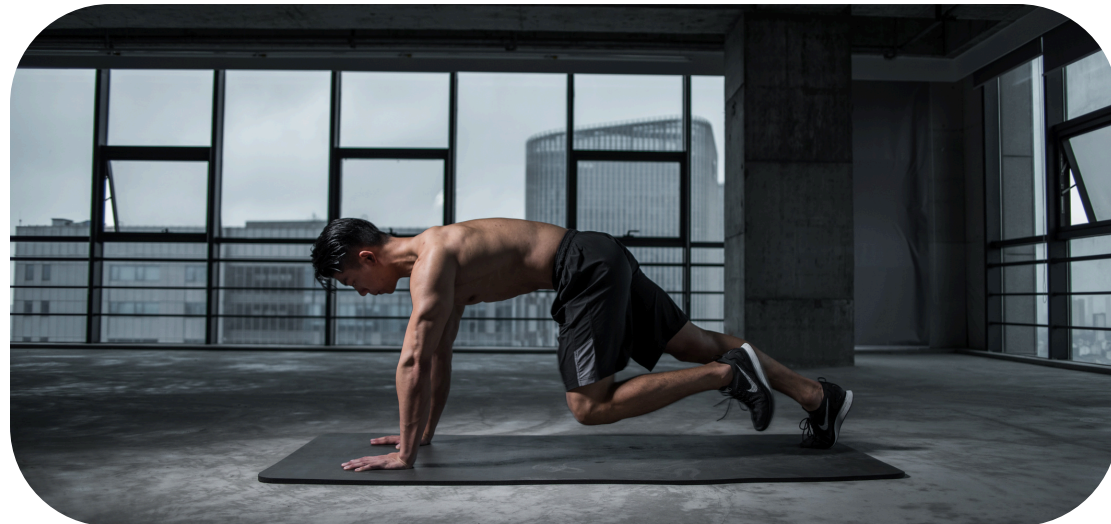


Periodization

Use structured programming cycles (macro-, meso-, and microcycles) to manage fatigue and optimize performance (Haff & Triplett, 2016).



SPECIALIZED INJURY PREVENTION CONSIDERATIONS



ACL Injury Risk is Higher in Female Athletes

4–6 times more likely to experience ACL injuries. Prevention programs should focus on strengthening the posterior chain, landing mechanics, and core stability (Myer et al., 2013).



Emphasize Neuromuscular Training

Incorporate exercises like single-leg squats, jump-land training, and balance drills (Hewett et al., 2006).



Menstrual Cycle Considerations

Be aware of changes in joint laxity and fatigue across phases of the menstrual cycle; adapt training as needed (Wikström-Frisén et al., 2017).

RESISTANCE TRAINING



01

Early Strength Gains & Neural Adaptations

- Initial improvements in strength result more from neuromuscular coordination than hypertrophy in this population (Faigenbaum et al., 2009).

02

Full-Body Training

2–3x/Week; Focus on multi-joint movements like squats, lunges, push-ups, and rows (Lloyd et al., 2016).

03

Dan John's "5 Movement Categories"

Push, Pull, Hinge, Squat and Carry
These movements develop general strength applicable to all sports and life skills (John, 2011).



Bodyweight → Resistance Progression:
Begin with bodyweight and progress to resistance bands, dumbbells, and barbells as technique improves (Myer et al., 2011).

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PLYOMETRICS, SPEED, AND AGILITY

01

Plyometric Training

Enhances power, bone mineral density, and injury prevention; start with low-impact variations and progress (Ford et al., 2005).

02

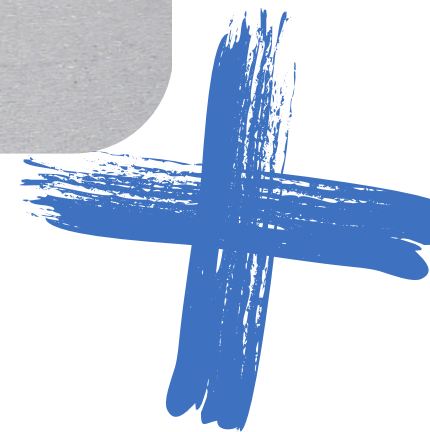
Agility Drills

Include deceleration and change-of-direction training to mimic sport demands and reduce injury risk (Sheppard & Young, 2006).

03

Sprint Mechanics

Teach proper form—forward lean, arm drive, and explosive hip extension—for safe speed development (Young et al., 2001).



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PSYCHOLOGICAL STRATEGIES

Research in sports leadership has shown that coach leadership style plays a significant role in personal and social skills, cognitive skills, goal setting and initiative (Albuquerque et al., 2021).



01

Empowerment Through Strength

Resistance training boosts confidence, self-image, and sport enjoyment in adolescent girls (Ratamess et al., 2009).

02

Goal Setting and Tracking

Encourage measurable progress through goal charts, training logs, and positive feedback (Weinberg & Gould, 2019).

03

Coach Communication

Use supportive and autonomy-driven coaching styles, particularly effective with female athletes (Vella et al., 2013).

04

“Park Bench vs. Bus Bench”

Park Bench = train with patience, consistency, and enjoyment.

Bus Bench = goal-chasing mindset that may not suit every phase of development.

Most high school athletes benefit from Park Bench training to avoid burnout and support long-term growth (John, 2013).

SQUAT PROGRESSION

Bodyweight Squat

- Feet shoulder-width apart, toes slightly out
- Sit back and down
- Knees track in line with toes
- Contract glutes and drive through heels

Goblet Squat

- Hold dumbbell or kettlebell at chest with elbows tucked
- Maintain upright torso
- Same lower-body cues as bodyweight squat

Front / Back Squat

- Bar rests on front delts, elbows high and parallel to the ground
- Chest up, upper back engaged
- Bar sits on traps (high-bar) or rear delts (low-bar)
- Squeeze shoulder blades together

Split Squat

- Staggered stance, back foot on toes
- Torso upright, shoulders stacked over hips
- Drop back knee straight down

Bulgarian Split Squat

- Back foot elevated on a bench
- Hips square and torso upright
- Lower until front thigh is parallel

Pistol Squat

- Extend one leg forward, arms out for balance
- Sit back and down with control
- Keep chest tall

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SQUAT PROGRESSION

Bodyweight Squat



Goblet Squat



Split Squat



Bulgarian Split Squat





Three Point Hinge

- Hold PVC vertically against back (touches head, mid-back, sacrum)
- Push hips back, keep spine neutral
- Return to standing with glutes

HINGE PROGRESSION

RDL

- Bar or dumbbell touching shins
- Lower until hamstrings stretch
- Drive hips forward to stand tall

KB Swing

- Hike kettlebell back with hips
- Explosively extend hips to swing
- Arms stay relaxed; don't lift with shoulders



KB Dead Lift

- Kettlebell between feet
- Hinge at hips, bend knees slightly
- Contract glutes to stand up
- Keep back straight throughout

HB/BB Dead Lift

- Hips down, chest up
- Drive through floor, keep bar path vertical
- Lock out with hips, not back

HB/BB Jumps & Cleans

- Start in deadlift position
- Explosively jump up, extend hips/knees/ankles
- Land softly with knees bent
- Reset each rep

VERTICAL AND HORIZONTAL PULLS



Scapular Pull Up

- Hang from bar with straight arms
- Retract scapulae (shoulder blades down & together)
- No elbow bend
- Pause at top, then relax

01

01

Eccentric Pull Up

- Start at top (chin over bar)
- Lower slowly (3–5 sec)
- Keep tension in lats
- Maintain hollow body position

02

02

Pull Up (Assisted)

- Start from dead hang
- Engage lats, drive elbows down
- Chin clears bar
- Control the descent

03

03

Inverted Row

- Body in straight line under bar
- Pull chest to bar by squeezing shoulder blades
- Elbows close to ribs
- Control the descent

SS Row

- In split stance, one dumbbell in opposite hand
- Row to ribcage while maintaining balance
- Brace core, no torso rotation
- Elbow close to body

Bent Row

- Hinge at hips, flat back
- Row to belly button
- Elbows close and drive back
- No momentum or torso swing



PUSHES AND PRESSES

Push Up

- Hands under shoulders
- Body in a straight line (no sagging hips)
- Lower until chest nearly touches floor
- Elbows at 45°

01

01

Bench Press

- Bar starts over mid-chest
- Lower with control, touch sternum
- Elbows at ~45°
- Drive bar straight up

02

02

Plyo Push Up

- Explode up so hands leave the ground
- Land with soft elbows
- Maintain tight core

03

03

Shoulder Press

- Bar or dumbbells at shoulder height
- Press overhead without arching back
- Elbows slightly in front of shoulders
- Lock out with biceps next to ears

Push Press

- Dip: bend knees slightly
- Drive: explode upward with legs
- Press: finish movement with arms
- Catch bar overhead with locked elbows

BB Jerk

- Dip and drive with quick force
 - Split (or squat) under the bar quickly
- Lock arms overhead
- Recover feet to standing
 - Keep bar over midline for balance

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Injury Prevention

Implement neuromuscular training programs focused on landing mechanics, hamstring strength, single-leg stability, and proprioception (Myer et al., 2013).

Long-Term Athletic Development

Use age-appropriate, progressive resistance training to establish a foundation of movement literacy, general strength, and sport versatility, rather than early specialization. (Lloyd et al., 2016)

Support and Motivation

Use positive feedback, inclusive coaching, and goal setting to empower and engage female athletes to increase self-confidence and decrease drop out rates (Vella et al., 2013)

KEY TAKEAWAYS

"Girls playing sports is not about winning gold medals. It's about self-esteem, learning to compete, and learning how hard you have to work in order to achieve your goals" (Joyner-Kersee, 2023)

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THANK YOU

Building team cultures for each athlete to thrive as both a
competitor and a person.

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