

PITCHING COUNT & SAFETY

A PARENT'S GUIDE TO SIGNS, SYMPTOMS, TREATMENT AND PREVENTION

The American Sports Medicine Institute recommends these regulations for age and pitch count.

AGE	MAX PITCHES PER GAME	MAX GAMES PER WEEK
8-10	52	2
11-12	68	2
13-14	76	2
15-16	91	2
17-18	106	2

For developing pitchers, small pitch totals with more frequency (e.g. two inning, three times per week) are easier on the arm and better for skill development than large pitch totals in a single outing (e.g. six innings, one time per week). It is most important for developing pitchers to have at least one day of rest after each game.

Relative body size is another factor that can play a role in arm care. For example, a skinny, 12-year-old with an above-average arm and below-average functional strength is in jeopardy to hurt his arm with large pitch totals in a single game. Conversely, a six-foot-tall, 180-pound 12-year-old should be able to better handle the high-end pitch total limit for a youth pitcher without significant risk of injury.

Once a pitcher of any age gets into muscle failure competition, every pitch is exponentially more stressful on the arm. The following is a single formula for youth pitchers: Every pitch past muscle failure equals three pitches before muscle failure. For example, a 12-year-old who hits muscle failure with 60 pitches in four innings but throws one more inning of 15 pitches actually stressed his arm the equivalent of 105 pitches.

With skill work, the pitcher should be completely warmed up and loosened up before going to the mound. Then, his pitch totals should be kept at 30 to 45.

PREVENTION STRATEGIES

Training/conditioning: Conditioning, flexibility, strength and functional movement training may reduce the risk of non-contact injuries

Proper mechanics: Proper throwing and mechanics reduces stress on joints and muscles reducing the risk of injury

Warm up and cool down: Baseball warm up involves both the lower and upper body. Start at a slower more relaxed pace and gradually increase intensity. When perspiration begins, the muscles are ready for a workout.

Stretching: Stretch only after having warmed up; a cold muscle is more likely to tear when stretched. Stretching after a workout increases flexibility and reduced stress on joints. Perform stretches slowly, holding each position for at least five seconds.

Nutrition: Proper diet and hydration before and during your workout will help you achieve peak performance.

Remember, throwing off of a mound puts more stress on an arm than throwing on flat ground. A poorly constructed mound can exacerbate this stress exponentially. Too many young pitches experiment with breaking balls and/or split-finger fast balls before they have developed proper mechanics and useable strength.

ICE AND AEROBIC ACTIVITY TO FACILITATE RECOVERY TIME

When a pitcher is in muscle failure with competitive pitch totals, just icing the arm isn't as effective for recovery as combining ice and some form of aerobic activity at an intensity level at which it's impossible to carry on a

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conversation. Ice should be used for a maximum 10 minutes on the elbow and 20 minutes on the shoulder. Two minutes of aerobic activity should be performed for every one minute of ice. If possible, ice and aerobics should be done at the same time.

SLEEP CYCLES TO FACILITATE RECOVERY TIME

All human beings need sleep to recover from their daily activities. Athletes, especially you and teenage athletes, are in need of even more sleep. Pitchers should plan to sleep at night for six hours, 7-and-a-half hours, or nine hours, and whenever possible, mix in a daily 20- to 30- minute "power nap."

HYDRATION TO FACILITATE RECOVERY TIME

Some of the first signs of dehydration are diminished concentration and an inability to focus. Simply hydrating early and often will actually facilitate a pitcher's mental acuity in preparation and competition. A pitcher should try to avoid diuretics of any variety, especially alcohol and caffeine. Coffee has caffeine, is a diuretic, and can cause muscle cramping during preparation and /or competition. Cramping muscles will pull extra fluids

and electrolytes from the system and can significantly delay the total-body recovery process.

PRICE

Protect your injury from further harm by using a brace, splint, immobilizer, or ace bandage.

Rest the injured area by not participating in activities that are painful to perform.

Ice the area for 20 minutes every 2 hours. Never use heat because that will cause the area to swell even more.

Compress the swelling using an ace bandage or a compression wrap to limit any further swelling. When wrapping the injured area start at the furthest point away from the body and move towards the body. Be sure that you are not cutting off circulation.

Elevate the injured area above the heart to pull blood flow away from the injured area. At night you can use pillows to elevate the injured area.

SPORTSCARE AT SSM CARDINAL GLENNON

Cardinal Glennon SportsCare is the premier pediatric sports medicine provider in St. Louis and St. Charles. We provide exclusive, direct access to comprehensive medical care for young athletes.

By working with multiple specialists and care partners, we guarantee your child will get the top care that is best suited to treat their unique injury, improving recovery time and outcome. Many of our services are offered in multiple locations so your child can even be treated close to home.

Specialists your child has access to through SportsCare include orthopedists, pulmonologists, cardiologists, radiologists, neurologists, emergency medicine physicians, adolescent medicine physicians, rehabilitation specialists, physical therapists, nutritionists and pediatric psychologists.

Partners your child has access to through SportsCare include SSM Cardinal Glennon Children's Medical Center, SSM Orthopedics, SSM Physical Therapy and SLUCare, the physicians of Saint Louis University.

We also keep kids in the game through educational programs and support for parents, coaches and athletes that focus on injury prevention, proper technique and overall athletic health. SportsCare is a young athlete's best connection to sports medicine and athletic well-being.

For more information about Cardinal Glennon SportsCare or to find a specialist for your athlete, call us at **314-577-5640** or visit us at cardinalglennon.com/sportscare.



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