

A group of young children are playing soccer on a green artificial turf field. In the foreground, a boy in a blue jersey with 'FORSPORT' on it is kicking a white soccer ball. To his right, a girl in a white jersey with an orange vest and 'FORSPORT' on it is also kicking the ball. Other children in blue and red jerseys are visible in the background. The scene is outdoors with a wooden fence and trees in the distance.

**Have We Restricted Coordinated  
Movement Development by Limiting  
Kids to a Specialized Organized  
Sport Too Early?**

**Kip Patterson ATC/L, CSCS  
Shawnee High School  
Head Athletic Trainer**

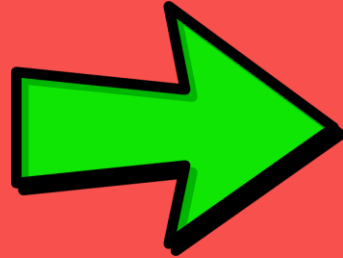
## Disclosure of Affiliations



**Do we “Play a Sport to Train”?**  
**OR**  
**Do we “Train to Play a Sport”?**



# Things that Drive me Crazy!



# The Messi Preparatory Day Care Academy for Future Division I Soccer Phenoms

(Disclaimer: This is a Fabricated Academy.)

(Unfortunately, Not a Fabricated Concept)

A promotional flyer for Little Kickers, featuring a red and yellow background. The text is white and black. There are four small photos of children playing soccer. The flyer includes contact information and social media links.

**Little Kickers®**

# Little Kickers

For little superstars aged:  
**18 months – 2yrs 3 months**

Teaching the fundamentals of soccer in a fun learning environment through a series of games using our tried and tested structure.

- Children are introduced to the basics of soccer (dribbling, striking, goal scoring etc.)
- Helps with physical development
- Improves cognitive and social skills
- A fantastic opportunity for you to assist in your child's early education

**BOOK NOW:**

GET IN TOUCH WITH US TO FIND OUT ABOUT OUR CLASSES  
CALL OR EMAIL COACH TOMA ON

Mobile: 078 233 1301  
Email: [preto@littlckickers.co.uk](mailto:preto@littlckickers.co.uk)

[f](https://www.facebook.com/littlckickers) @littlckickerspreto  
[t](https://twitter.com/LK24East) @LK24East  
[i](https://www.instagram.com/littlckickerspreto)



**Teaching Sound Sport Specific Skills are Good...  
But Building a Good Fundamental Movement Foundation is Critical**

# Stages of Adolescent Development

## Early Adolescence - Approximately Ages 11 - 13

### **Puberty Begins!** The Biological Changes of Adolescence

- “The Awkward Years” Begin to Worry about their Body & being “Normal”
- Tremendous Physical Growth: Gain Height & Weight
- Girls Begin to Develop Breast and Hip (Onset of Menstruation)
- Boys Suddenly Begin to Realize Girl Germs are Not So Bad
- Struggle with a sense of Identity

# Stages of Adolescent Development

## **Middle Adolescence - Approximately Ages 14 - 18**

- **Intense Self-Involvement**  
**(Changing between High Expectations and Poor Self-Concept)**
- **Continued Adjustment to Changing Body**  
**(Worries about being “Normal”)**
- **Driven to Make Friends and a Greater Reliance on Them**  
**(Popularity can be an Important Issue)**
- **Puberty is Completed**
- **Physical Growth slows for Girls, but Continues for Boys**



**Unrealistic Pressure**

**Stress to Perform**

**Play Through Significant Injuries**

**Multiple Clubs/Teams**

**School Work**

**No Recovery Time**

**Kids Trying to Grow into their New Bodies!!**



IN CONGRESS, JULY 4, 1776.

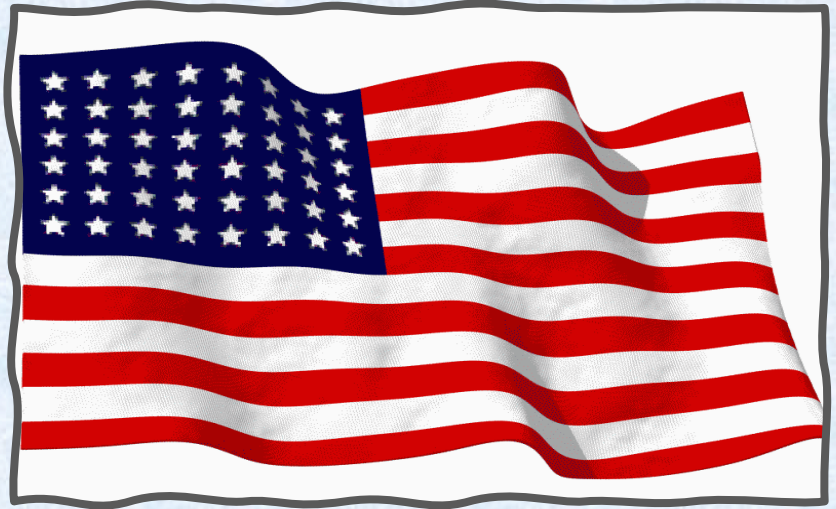
The unanimous Declaration of the thirteen united States of America.

When in the Course of human Events, we have regarded the foregoing as the most solemn and sacred of all occasions, we have solemnly and unanimously declared, that the thirteen united States of America, are free, sovereign and independent States, that they are absolved from all allegiance to the British Crown, and that all future support of the said Crown, shall be entirely discontinued by us.

John Hancock, President of the Continental Congress.
George Washington, Commander in Chief of the Continental Army.
Other signatories include: Thomas Jefferson, John Adams, Benjamin Franklin, etc.

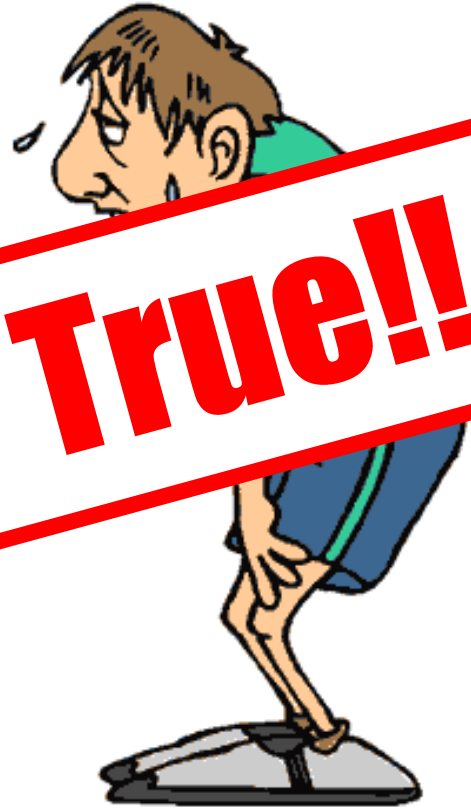
“All Men are Created Equal..”

-Thomas Jefferson



**Athletically Speaking...**

**This is NOT True!!**



# Ferrari “Club Sports”



The Gateway to Division I Sports

**SPICY, right!!**

# Ferrari Club Sports

## Day 1:



**Rare Extremely Talented & Gifted Athletic Phenom**



**Average Developing Sport Athlete**



**Under Conditioned, Poorly Coordinated Participant**

**Step 1:**

**Get'em on the "Track" and Show'em WHAT a Ferrari can DO!**



**Step 2:**

**Go Play 24/7 Year Round on Multiple Club Teams!!**



**ALACAZAM...**

**Everyone is going to be a Division 1 Athlete**

**WRONG-O !!!!**



**This is what ends up in our Athletic Training Room**



**Pediatric Specialists have noted a Dramatic Increase in Sports-Related Injuries which were previously Rare or Unheard Of in Adolescent Bodies**

- Stress Fractures of Lumbar
- Avulsion Fractures of Hip Flexors
- Labral Tears in Hip and Shoulder
- Ulnar Collateral Ligament damage in the Elbow  
(Tommy John surgery 15-19 yr olds)
- Anterior Cruciate Ligament (ACL) Epidemic Levels (Girls 8x's more likely)



# Adolescent Sport Specialization

- **Sports Specialization was leading to injuries and burnout amongst adolescents**  
**American Medical Society of Sports Medicine 2014**
- **Adolescents who Specialized in a Sport are less likely to be physically active as adults**  
**Ohio State University**
- **Early Specialization in One Sport is the single best predictor of injury.**
- **Athletes 70-93% more likely to be injured than the players in multiple sports.**  
**Dr. Neeru Jayanthi at Loyola University**
- **Fear of Falling Behind their Competition. Specialization of Sport leads to 60% of the injuries**  
**ligament tears in the knees and ankles.**
- **Stress on Specific Muscle Groups. Risk of Exposure. Fatigue. Over Training.**  
**Tim McGuine PhD, ATC at University of Wisconsin**

**“Don’t treat kids like they are professional athletes.”**  
**“They are not ready for that level of high-intensity training.”**

- **30 - 45 million youths participate in sports**
- **Sports are the leading cause of adolescent injuries. 3.5 million under age 14 are being treated for sport-related injuries annually.**
- **Do not overwork a youth’s DEVELOPING body by playing a single sport year-round and multiple leagues at once.**
- **Best way to protect youths is by teaching proper techniques (fundamental movement development)**
- **Time Off**
- **60 - 70% of children drop out of sports by age 13 due to parental, peer or coaching pressure.**

**Dr. James Andrews M.D.**  
**Orthopedic Surgeon**

# **Why is this Happening?!?**

## **The Perfect Storm**

- **Parents, Coaches and “trainers” (club coach) are asking too much of their ill-prepared adolescent bodies**
- **No Rest (no off-season)**
- **Specializing in ONE Sport or Year-Round Multiple Athletics (at the same time)**
- **Increasingly Strenuous Workout Regimens**
- **Poor Warm Up and Practice Routines**
- **Playing Through Serious Injuries that are Not Properly Treated or Allowed to Heal (could lead growth disturbances, deformities and/or arthritis)**
- **A Cultural Mindset placing too great an emphasis on Competition and Athletic Success**

**\*Perhaps Focus Shift Back to the Purpose of Sport... Better Physical & Mental Health, Self-Confidence, Stronger Socialization Skills, the Ability to Play Well with Others and FUN!**

# 10 Pillars for Successful Long-Term Athletic Development

No.	Description
1.	Long-term athletic development pathways should accommodate for the highly individualized and non-linear nature of the growth and development of youth.
2.	Youth of all ages, abilities and aspirations should engage in long-term athletic development programs that promote both physical fitness and psychosocial well-being.
3.	All youth should be encouraged to enhance physical fitness from early childhood, with a primary focus on motor skill and muscular strength development.
4.	Long-term athletic development pathways should encourage an early sampling approach for youth that promotes and enhances a broad range of motor skills.
5.	Health and well-being of the child should always be the central tenet of long-term athletic development programs.
6.	Youth should participate in physical conditioning that helps reduce the risk of injury to ensure their on-going participation in long-term athletic development programs.
7.	Long-term athletic development programs should provide all youth with a range of training modes to enhance both health- and skill-related components of fitness.
8.	Practitioners should use relevant monitoring and assessment tools as part of a long-term athletic development strategy.
9.	Practitioners working with youth should systematically progress and individualize training programs for successful long-term athletic development.
10.	Qualified professionals and sound pedagogical approaches are fundamental to the success of long-term athletic development programs.

**Figure 1:** Ten pillars for successful long-term athletic development. Reprinted from Lloyd, RS, Cronin, JB, Faigenbaum, AD, Haff, GG, Howard, R, Kraemer, WJ, Micheli, LJ, Myer, GD, and Oliver, JL. (2016) National Strength and Conditioning Association position statement on long-term athletic development. *J Strength and Condi Res* 30: 1491–1509, 2016 by permission of the National Strength and Conditioning Association.



**Where Have These Days Gone?**



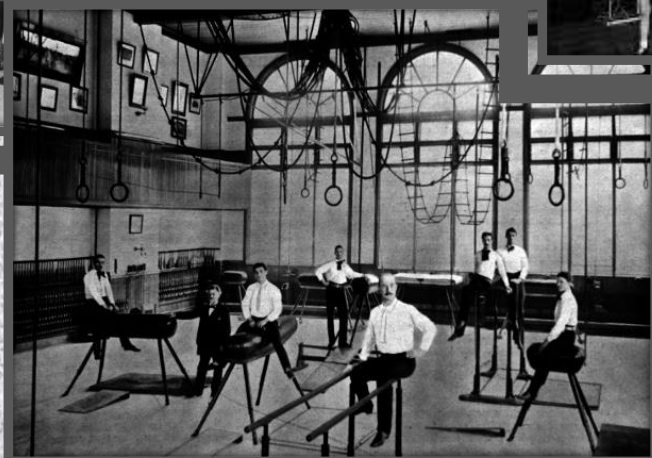
## 10 Basic Athletic Movements

### Stability and Balance

- 1) Running
- 2) Jumping
- 3) Squating
- 4) Pushing
- 5) Pulling
- 6) Holding/Catching
- 7) Throwing
- 8) Swinging
- 9) Rotating
- 10) Reaching and Extending (Dive/Rolling)



# Memory Lane is NOT so Far Away!!





# Perhaps: A Return to Utilizing Childhood Games could help build Coordinated Movement for Athletes

- Hop Scotch
- Jump Rope
- Hula Hoop
- Monkey Bars
- Potato Sack Races
- Tag
- Team Handball
- Obstacle Courses



# Athletic Training for “**FERRARI** Fabrication”

## “Put the **FUN** Back Into **FUN**damentals”



In Order to **PERFORM** Like a **FERRARI**  
You Must First **BUILD** the **FERRARI**

**So What IF...**

**Coaches/Athletic Trainers DEVELOP a Coordinated  
Movement Foundation for Every Child to “Even” the  
Playing Field so there is Not such a Divide between  
the “Have” and the “Have Nots” in Sports**

## **Some Possible Side Effects**

- **Discipline**
- **Attention to Detail**
- **Self-Confidence**
- **Overall Coordination**
- **Avoid INJURY**

**Equip the Adolescent to Avoid and/or Combat “Bullying”**

# Build a GOOD Foundation!!

## 1) Genetics

**Body Type**

**Orthopedic Concerns**

**Some are just Blessed**

## 2) What is Coachable

**Athletic Form**

**Technique**

**Body Control**

**Core Strength**

**Endurance**

**Speed**

**Recovery Efficiency**



# Define the Issue

**Athlete: one who participates in organized team or individual sports that require regular competition against others as a core component and high value on excellence and achievement through some form of systematic training (usually supervised by a coach)**  
– American Heart Association



**Athletic: possessing a combination of Strength, Speed, Endurance, Agility, Balance and Coordination.**

## **Certified ATHLETIC Trainers**



**An Extremely Talented Soccer Player who WORKED  
on his Soccer Skills for YEARS!!**



**Talented Skill Play does not always mean the Athlete has  
Developed Overall Coordinated Movement**



## **Types of Coordination**

- **Fine Motor Skills - Small Muscle Movement**
- **Gross Motor Skills - Large Muscles or Groups of Muscles**
- **Hand-Eye Skills - Visual System to Coordinate Information to Control or Direct Movement to Accomplish a Task**

# **Coordination of Movement**

- **Ability to Execute Smooth, Accurate and Controlled Motor Response**
- **Ability to Select the Right Muscles at the Right Time with Proper Intensity to Achieve Proper Action**
- **Characterized by Appropriate Speed, Distance, Direction, Timing and Muscular Tension**
- **Process that Results in Activation of Motor Units of Multiple Muscles with Simultaneous Inhibition of all other Muscles in order to Carry Out a Desired Activity**

# Running is a Fundamental Movement



**No Arm  
Swing**



# Proper Running Form

**"Running is controlled falling"**

**F**orward Lean

**A**rms Chest to Hips

**S**tride Length

**T**rail Foot (Narrow Stance)

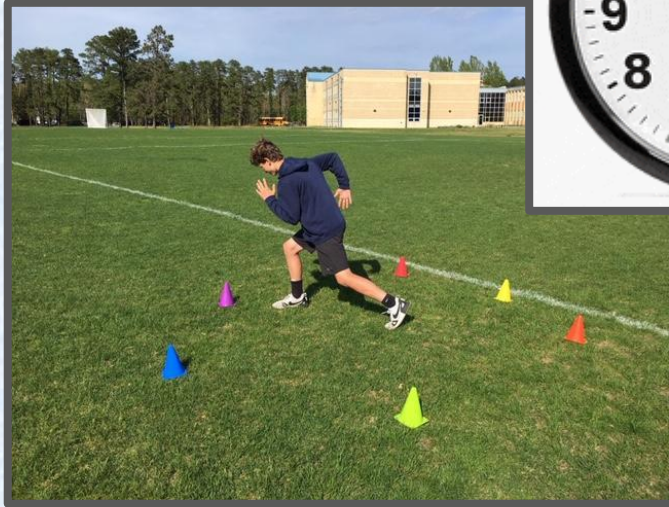
**E**xplode - Landing on Midfoot

**R**PM - Rate of Turnover



Donald Kessler MEd, ATC  
US Navy SEALs BUDS  
Head Athletic Trainer

# Change of Direction - Clock Drill





**Bullets**  
*Gettysburg College*

**Division III  
Women's Lacrosse**

# **The Adolescent Female Athlete Quagmire**

## **ACL Tears - The Perfect Storm**

- **Increased “Q Angle” of hips to knees**
- **Estrogen may make the female ACL weaker and more prone to injury**
  
- **Obsession with Specialization of Sport Year-Round**
- **Not playing other sports or otherwise conditioning (overtaxing same muscle groups)**
- **Greater level of sport intensity**
- **No Recovery**
  
- **Neuromuscular training appears to reduce the risk of injury in the female adolescent athlete by 72%**
- **Training that incorporates plyometric and strengthening exercises, combined with feedback to the athlete on proper technique.**

**American Academy of Pediatrics**

# How to Lose \$30,000.00 (+) Dollars and Adversely Alter Your Life



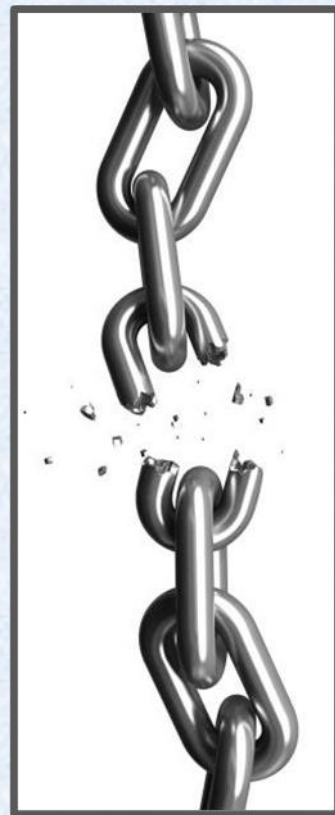
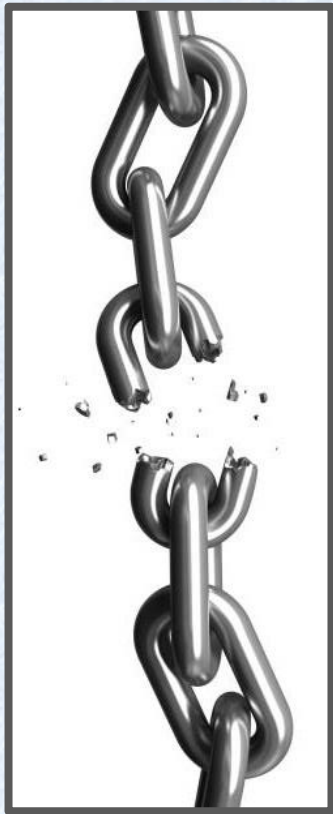


# Change of Direction with Foot Planted!! (Twist Pivot)

**\*\*Change Direction in Space\*\***

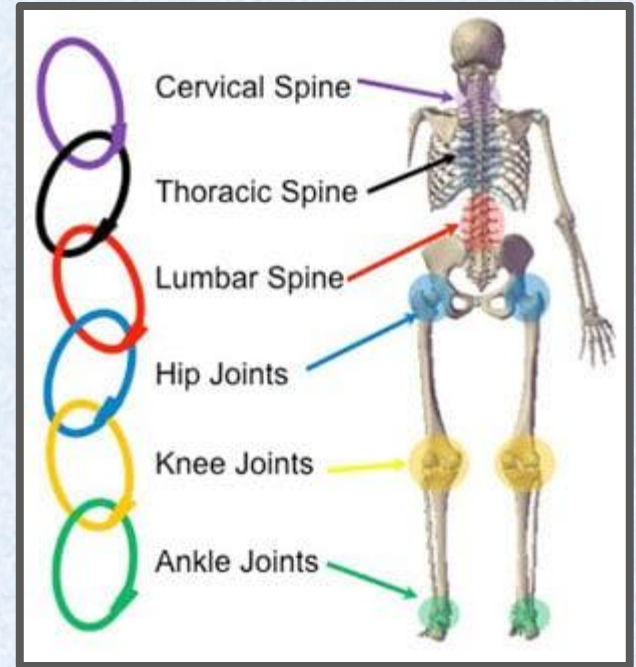


# Dynamic Knee Valgus



# Dynamic Kinetic Chain Stability

**The ability of the body's interconnected joints and muscles to maintain control and stability during movement, ensuring smooth and efficient force transfer throughout the kinetic chain, which is essentially the series of joints linked together from the feet to the hands, allowing for coordinated movement across the body.**

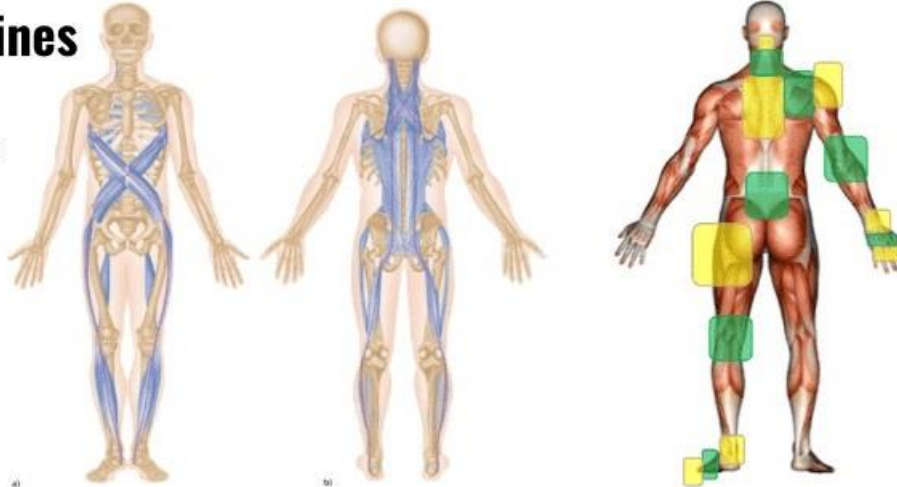


# Dynamic Kinetic Chain Movements

**Movements that use the body's muscles and joints to perform a task, such as sports or other activities. The kinetic chain is a system that describes how the body's parts work together to perform a movement.**

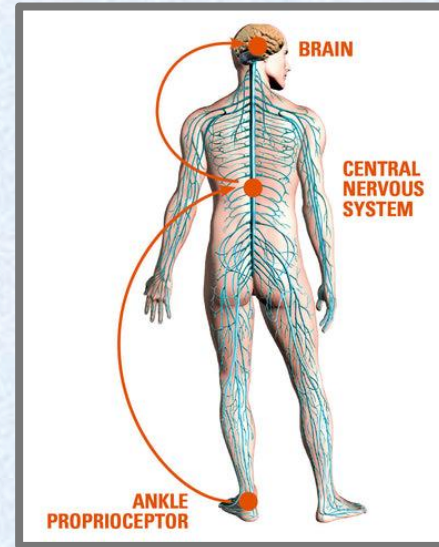
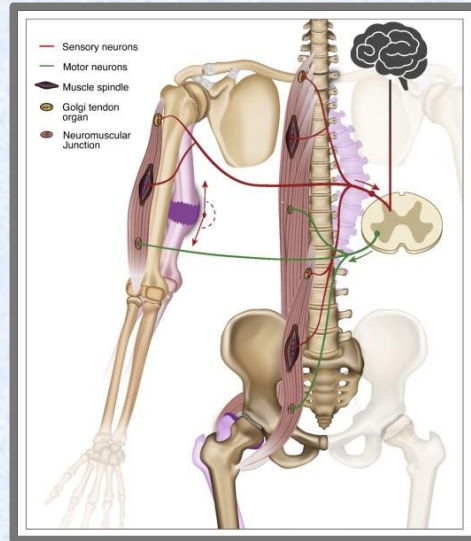
## Fascia Lines

fascia is a sensory organ encasing muscles and joints in connected lines through out the body



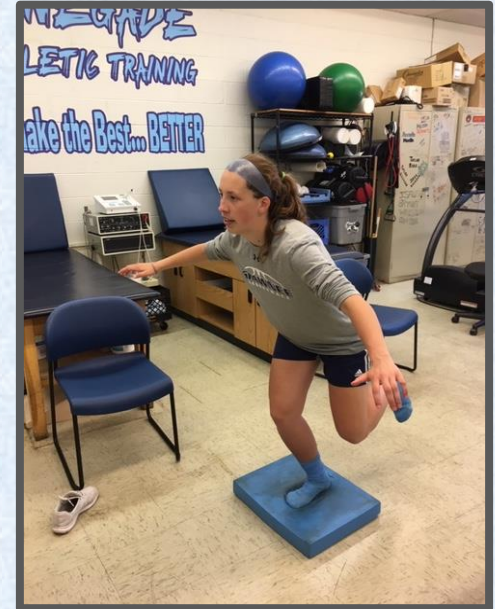
# Neuromuscular Proprioception

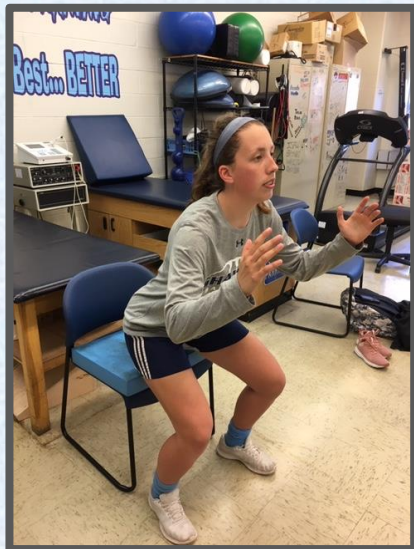
**The combination of proprioception and neuromuscular control, which are both important for maintaining joint stability and balance. Proprioception is a type of sensory information that gives us a sense of joint position and movement. Neuromuscular control is the communication between the brain and muscles that allows us to consciously and subconsciously control our movements.**



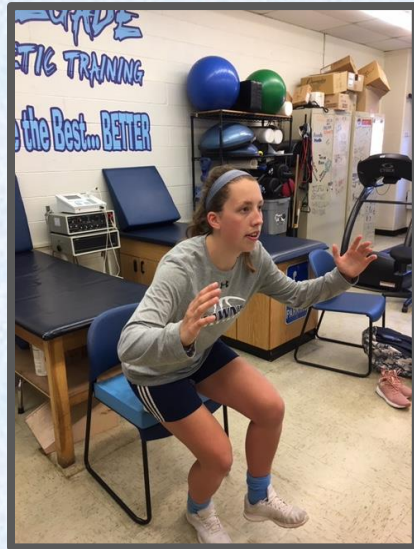
# Stability and Balance

## Slow Skate





**Squat**



**One Leg Squat**



**Ninja Squat Jumps**



## Planks - Front, side, roll outs



## Step Ups



## Hamstring Curls



## Romanian Deadlift





# Posterior Chain Dynamic Exercise





**Dynamic Functional  
Athletic Training**

**STAY TUNED**

**Learning LAB #1**

# Thank You ATSNJ



- American Academy of Child and Adolescent Psychiatry (AACAP) website at <http://www.aacap.org/publications/factsfam/develop.htm>
- Focus Adolescent Services website at <http://www.focusas.com/Parenting.html> A Clearinghouse of Information, Resources and Support
- Rice, P. and Dolgin, K. Adolescents in Theoretical Context from The Adolescent: Development, Relationships and Culture, 10th edition. Boston: Allyn and Bacon. 2002.
- Resnick MD et al. Protecting adolescents from harm: findings from the National Longitudinal Study on Adolescent Health. JAMA 1997; 278:823-32.
- Steinberg L. We know some things: parent-adolescent relationships in retrospect and prospect. Journal of Research in Adolescence 2001; 11:1-19.

Stages of Adolescent Development **Research Facts and Findings, May 2004**

A publication of the ACT for Youth Center of Excellence by Sedra Spano

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[https://www.physio-pedia.com/Coordination\\_Exercises](https://www.physio-pedia.com/Coordination_Exercises)

<https://www.healthychildren.org/English/ages-stages/teen/Pages/Stages-of-Adolescence.aspx>

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<https://www.youtube.com/watch?v=EcK8btsPN9Q>  
<https://www.youtube.com/watch?v=6x-cG9giKXY>  
<https://www.youtube.com/watch?v=Ginta9ovBYo>  
<https://www.bupa.co.uk/newsroom/ourviews/health-benefits-childhood-sports>  
<https://www.orlandosentinel.com/health/get-healthy-orlando/os-james-andrews-florida-hospital-orlando-20160316-story.html>  
[https://www.prearesourcecenter.org/sites/default/files/content/6\\_stages\\_of\\_adolescent\\_development.pdf](https://www.prearesourcecenter.org/sites/default/files/content/6_stages_of_adolescent_development.pdf)  
<https://www.edutopia.org/blog/5-fun-gym-games-get-kids-moving-michael-choinacky?gclid=CjwKCAjwvbLkBRBbEiwAChbckZM4QQXVA9B0wDmgYLUea3JbSpRihBPGuTtLJMaUqLFfs9Ev26C>  
<https://thephysicaleducator.com/standards-based-pe-games/>  
<https://kidzu.co/sports-athletics/why-specializing-in-one-sport-is-a-bad-idea/>  
<https://kidzu.co/health-happiness/safety/why-girls-suffer-high-rates-of-acl-tears/>  
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