



INTERNATIONAL TALENT FOOTBALL CLUB

Youth Player Sport Science Guide

PURPOSE

This guide provides essential sport science principles to help youth players (8-16 years) optimize their training, recovery, and overall development.

1. TRAINING PRINCIPLES & PERIODIZATION

OPTIMIZING YOUR DEVELOPMENT JOURNEY

1 Progressive Overload

Gradually increase training demands to stimulate improvement

- Increase training volume, intensity, or complexity over time
- Week 1-2: Focus on technique and learning new skills
- Week 3-4: Build consistency and add moderate intensity
- Week 5-6: Higher intensity with maintained technique
- Week 7-8: Peak performance and testing
- Week 9-10: Active recovery and regeneration

2 Rest & Recovery

Recovery is when improvement happens, not during training

- **Sleep:** 9-11 hours per night for ages 8-16
- **Rest Days:** Minimum 1-2 complete rest days per week
- **Reactive Recovery:** Light activity on training days (walking, stretching)
- **Listen to Body:** Reduce intensity if feeling fatigued or sore
- **No consecutive high-intensity days:** Alternate hard and easy sessions

TIP

Keep a training journal to track how you feel daily. This helps identify patterns and optimal training intensity.

3 Quality Over Quantity

Perfect execution of drills beats mindless repetition

- Focus on proper technique in every repetition
- 30 perfect quality touches > 100 sloppy touches
- Stop when form breaks down, not when time is up
- Quality sessions leave you energized, not exhausted
- Coaches notice technique and effort, not just endurance

2. NUTRITION FOR YOUNG ATHLETES

FUELING PERFORMANCE & GROWTH

4 Pre-Training Nutrition

Eat 2-3 hours before training for optimal energy

- **Carbohydrates:** Pasta, rice, bread, fruits (primary energy source)
- **Protein:** Lean meats, eggs, dairy, legumes (muscle repair)
- **Avoid:** Heavy, greasy, or sugary foods right before training
- **Hydration:** Start drinking 2 hours before, sip water continuously
- **Example:** Banana with peanut butter, or oatmeal with berries

5 Post-Training Recovery

Refuel within 30-60 minutes after training

- **Carbohydrates:** Replenish energy stores (fruit, sports drink, chocolate milk)
- **Protein:** Support muscle repair (20-30g: yogurt, protein shake, lean meat)
- **Hydration:** Replace lost fluids (water + electrolytes)
- **Avoid:** Processed foods, excessive sugar, heavy meals
- **Golden Window:** Body absorbs nutrients most efficiently right after exercise

6 Daily Nutrition Guidelines

Balanced diet for growth and performance

Food Group	Daily Servings	Examples
Vegetables	3-5 servings	Leafy greens, carrots, broccoli, peppers
Fruits	2-4 servings	Apples, bananas, berries, oranges
Grains	6-11 servings	Whole grain bread, pasta, rice, oatmeal
Protein	2-3 servings	Chicken, fish, eggs, beans, nuts
Dairy	2-3 servings	Milk, yogurt, cheese

3. HYDRATION & FLUID MANAGEMENT

STAYING PROPERLY HYDRATED

7 Daily Hydration Requirements

Proper hydration before, during, and after activity

- **Daily Intake:** 1.5-2L water per day (plus training fluids)
- **Pre-Training:** 500ml 2 hours before, 250ml 15 minutes before
- **During Training:** 150-200ml every 15-20 minutes
- **Post-Training:** For every 0.5kg lost, drink 600-750ml
- **Electrolytes:** Add electrolyte drinks for sessions >60 minutes

8 Recognizing Dehydration

Early warning signs and prevention

- **Thirst:** Already dehydrated - drink before feeling thirsty
- **Urine Color:** Pale yellow = good, dark yellow = need more water
- **Fatigue:** Feeling tired earlier than normal
- **Dizziness:** Light-headedness or headaches
- **Performance:** Reduced speed, strength, and coordination
- **Prevention:** Consistent fluid intake throughout the day

⚠ WARNING

Dehydration increases injury risk, reduces decision-making ability, and significantly decreases performance. Stay hydrated!

4. RECOVERY STRATEGIES

OPTIMIZING RECOVERY BETWEEN SESSIONS

9 Sleep Quality & Duration

Sleep is the most powerful recovery tool

- **Age 8-10:** 10-11 hours per night
- **Age 11-13:** 9.5-10.5 hours per night
- **Age 14-16:** 9-10 hours per night
- **Consistency:** Same bedtime and wake time daily
- **Environment:** Dark, cool, quiet room; no screens 1 hour before bed
- **Performance:** One hour less sleep = 10-20% performance decrease

10 Active Recovery Techniques

Light movement promotes faster recovery

- **Light Walking:** 15-20 minutes on rest days
- **Stretching:** Daily flexibility work, focus on tight areas
- **Foam Rolling:** Gentle self-massage for muscle relaxation
- **Swimming/Cycling:** Low-impact cardio for blood flow
- **Yoga:** Flexibility, balance, and core strengthening
- **Avoid:** Complete inactivity on rest days

11 Post-Session Cool Down

Gradual return to resting state

- **5-10 minutes light jogging or walking**
- **Static stretching:** Hold each stretch 20-30 seconds
- **Focus areas:** Quads, hamstrings, calves, hip flexors
- **Deep breathing:** Calm nervous system, reduce heart rate
- **Hydration:** Replace fluids lost during training
- **Never skip:** Essential for next day's performance

TIP

Ice baths are generally not recommended for young athletes. Focus on proper nutrition, hydration, and sleep instead.

5. INJURY PREVENTION

STAYING HEALTHY & AVAILABLE

12 Proper Warm-Up Protocol

Preparation prevents injury and enhances performance

- **Phase 1 (5 min):** Light jogging, increasing body temperature
- **Phase 2 (5 min):** Dynamic stretching (leg swings, arm circles, torso twists)
- **Phase 3 (5 min):** Sport-specific movements (dribbling, passing, light sprints)
- **Phase 4 (3 min):** Progressive intensity (build to training speed)
- **Duration:** 18-20 minutes total pre-training warm-up

13 Strengthening for Injury Prevention

Build resilience in injury-prone areas

- **ACL Prevention:** Single-leg squats, lateral lunges, plyometrics
- **Ankle Stability:** Balance exercises, calf raises, ankle circles
- **Core Strength:** Planks, bridges, rotational exercises
- **Hip Strengthening:** Clamshells, monster walks, lateral band walks
- **Hamstring Health:** Nordic curls, deadlifts, hamstring slides
- **Frequency:** 2-3 times per week, 15-20 minutes

14 Recognizing Overuse Injuries

Early detection prevents serious damage

- **Persistent Pain:** Pain that doesn't improve with rest
- **Morning Stiffness:** Joints feel stiff when waking up
- **Decreased Performance:** Noticing declining speed or power
- **Muscle Imbalances:** One side stronger or more flexible
- **Fatigue:** Feeling unusually tired despite adequate rest
- **Action:** Tell coaches/parents immediately, see medical professional

⚠ WARNING

Never play through pain. "No pain, no gain" does not apply to young developing bodies. Pain is your body's warning system.

6. MENTAL PERFORMANCE

PSYCHOLOGICAL SKILLS FOR SUCCESS

15 Goal Setting

Clear goals provide direction and motivation

- **Process Goals:** Focus on effort, technique, and attitude
- **Performance Goals:** Specific measurable improvements
- **Outcome Goals:** Competitive results (limited use)
- **Short-term:** Weekly or monthly achievable targets
- **Long-term:** Development vision over 6-12 months
- **Write them down:** Review and adjust regularly

16 Visualization & Mental Rehearsal

See success before it happens

- **Daily Practice:** 5-10 minutes before bed or training
- **Specific Scenarios:** Visualize perfect execution of skills
- **All Senses:** What you see, hear, feel in the situation
- **Positive Outcomes:** Always visualize success
- **Competition:** Pre-match visualization of confident performance
- **Benefits:** Improved confidence, reduced anxiety, better decision-making

17 Positive Self-Talk

Inner dialogue affects outer performance

- **Awareness:** Notice negative thoughts during training
- **Replace:** "I can't" → "I'll try my best"
- **Encourage:** Talk to yourself like a supportive teammate
- **Process Focus:** Focus on what you CAN control
- **Cue Words:** "Focus," "Quick," "Calm," "Attack"
- **Practice:** Positive self-talk is a skill that needs practice

18 Managing Pressure & Anxiety

Stay calm under pressure

- **Deep Breathing:** 4-7-8 technique (inhale 4, hold 7, exhale 8)
- **Focus on Process:** One touch, one play at a time
- **Pre-Routine:** Consistent preparation before each game
- **Pressure is Normal:** Everyone feels it, champions manage it
- **Enjoyment:** Remember why you love the game
- **Perspective:** One game doesn't define you

TIP

Develop a pre-game routine that includes visualization and calming techniques. Consistent routines reduce anxiety and increase confidence.

7. TRAINING SCHEDULE & BALANCE

OPTIMAL WEEKLY STRUCTURE

19 Recommended Weekly Structure

Balanced approach for sustainable development

Day	Activity	Focus	Intensity
Monday	Ball Skills Training	Technical Development	Medium
Tuesday	Fitness Workout	Physical Conditioning	High
Wednesday	Active Recovery	Regeneration	Low
Thursday	Speed Training	Acceleration & Agility	High
Friday	Team Training	Tactical & Technical	Medium-High
Saturday	Match Day	Performance	Variable
Sunday	Rest & Recovery	Complete Rest	None

20 Multi-Sport Participation

Benefit from playing other sports

- **Age 8-12:** Participate in 2-3 different sports
- **Age 13-16:** Focus on soccer but maintain one complementary sport
- **Benefits:** Develop different movement patterns, prevent overuse, avoid burnout
- **Complementary Sports:** Basketball, tennis, swimming, gymnastics
- **Timing:** Schedule complementary sports in off-season or as secondary focus
- **Avoid:** Specializing too early in one sport only

8. MONITORING & TRACKING

MEASURING YOUR PROGRESS

21 Daily Readiness Assessment

Track how you feel to optimize training

- **Sleep Quality:** Rate 1-10 upon waking
- **Energy Level:** How energized do you feel?
- **Muscle Soreness:** Any significant soreness?
- **Mood:** Motivated and positive or tired and flat?
- **Adjustment:** Low scores = lighter training day
- **Pattern Recognition:** Identify what affects your readiness

22 Performance Testing

Regular testing shows progress

- **Frequency:** Every 6-8 weeks
- **Speed:** 10-yard, 20-yard, 40-yard sprints
- **Agility:** Pro-shuttle (5-10-5) test
- **Endurance:** Yo-Yo intermittent test or 1.5-mile run
- **Technical:** Dribbling speed, passing accuracy
- **Record:** Keep results in training journal
- **Goal:** Show improvement over time, not perfection

TIP

Compare yourself to your previous results, not others. Personal progress is what matters most.

9. PARENT & COACH SUPPORT

CREATING THE BEST ENVIRONMENT

23 Effective Communication

Open dialogue supports development

- **Regular Check-ins:** Discuss training, feelings, and goals
- **Listen More:** Let player express their thoughts first
- **Positive Reinforcement:** Focus on effort and improvement
- **Constructive Feedback:** Specific, actionable guidance
- **Problem Solving:** Work together to overcome challenges

24 Creating a Supportive Environment

Success starts with the right environment

- **Focus on Development:** Long-term growth over short-term results
- **Enjoyment First:** Keep the game fun and enjoyable
- **Respect:** Treat coaches, teammates, opponents with respect
- **Autonomy:** Give players ownership of their development
- **Balance:** Prioritize school, family, and social life alongside soccer
- **Patience:** Remember, development is a marathon, not a sprint

10. KEY TAKEAWAYS

ESSENTIAL PRINCIPLES

📌 FUNDAMENTAL PRINCIPLES

- **Quality over Quantity:** Perfect technique beats mindless repetition
- **Recovery is Training:** Improvement happens during rest, not work
- **Nutrition Fuels Performance:** Eat to fuel, don't fuel to eat
- **Sleep is Critical:** 9-11 hours per night for optimal development
- **Listen to Your Body:** Pain and fatigue are warning signals
- **Mental Skills Matter:** Train your mind like you train your body
- **Consistency Trumps Intensity:** Regular moderate training beats sporadic intense sessions
- **Multi-Sport Benefits:** Variety prevents burnout and develops well-rounded athletes
- **Long-Term View:** Focus on development, not immediate results
- **Enjoy the Journey:** Remember why you started playing

⚠️ FINAL REMINDER

Youth development is about creating healthy, well-rounded individuals who love the game. Success at youth level doesn't guarantee adult success. Prioritize health, enjoyment, balanced development over winning at all costs.

International Talent Football Club

Developing Talent, Building Champions