Gator Peak Performance Guide for Students and Parents

An Outline of Training Philosophy for Building Strong, Powerful, and Healthy Youth Athletes

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Introduction

This guide is for students, parents, and anyone interested in building stronger, healthier youth athletes. The goal is to educate the reader about our staff’s approach to building strength, speed, and power while keeping our student athletes as healthy as possible. Training athletes should be an intelligent and intentional pursuit, and at SHP we want every student to understand why and how we train. After reading through the guide, you will hopefully have a better understanding of our department’s goals and how we achieve those goals. For a more in-depth treatment, please refer to the coaches’ guide on the resource page.

Philosophy

Guiding Principles of Athletic Performance

• Principle 1: Do no harm!
  o Performance coaches should do everything in their power to prevent injury when training.
  o Attrition in the weight room is to be avoided at ALL costs!
  o This is accomplished by:
    ▪ Appropriate exercise selection
    ▪ Proper progression/regression of exercises
    ▪ Sensitivity to the needs of individual athletes
    ▪ Designing programs based on current abilities
    ▪ Avoiding “one size fits all” doctrines and plans
    ▪ Perfecting movement quality

• Principle 2: Attempt to prevent harm from the rigors of sport participation
  o Once we establish a safe training space, the next step is to prepare the athlete to excel at their chosen sport(s).
  o This is accomplished by:
    ▪ Using progressive weight training to increase strength and power
    ▪ Incorporating in-workout flexibility to improve joint range of motion and movement patterning
    ▪ Performing comprehensive core training to stabilize the spine and create a platform for efficient energy transfer
    ▪ Improving work capacity through progressive endurance training (when applicable)
    ▪ Introducing nutrition, mental-skills, and positive lifestyle concepts

• Principle 3: Help student-athletes meet their athletic potential and help them realize their athletic dreams
  o When the student-athlete is confident they will not get injured during training, and they have established excellent movement quality, strength, power, range of motion, and endurance, they are then ready to maximize their athletic potential.
  o This is accomplished by:
    ▪ Progressing to more complicated training methods
    ▪ Introducing more advanced nutrition, mental-skills, and positive lifestyle concepts
    ▪ Preparing for training beyond high school (when applicable)
The Performance Pyramid

Description
The performance pyramid provides a framework for building healthy, injury-proof athletes. Like a physical pyramid, it can only climb as high as the foundation allows. Establishing pristine movement patterns creates the soundest base for safely building strength, power, agility, and endurance. Once an athlete moves well, other parameters of performance can be enhanced. The performance pyramid looks like this:

- High Quality Movement Patterns
- Total Body Strength
- Total Body Power
- Plyos & Agility
- Peak Performance

High Quality Movement Patterns
The body can best display strength and power when basic, natural movement patterns are precise, consistent, and (mostly) unaffected by fatigue. Realizing the full benefit of any exercise requires a foundation of perfect movement. The patterns we seek to perfect are:

- The Squat
- The Hip Hinge
- The Lunge (multi-directional)
- The Bridge
- Push Patterns (vertical, horizontal, incline)
- Pull Patterns (vertical, horizontal, incline)
We perfect these patterns using two complementary methods:

1. **Practice, Feedback, and More Practice**
   a. We call them patterns because these movements must be repeatable. Practice helps engrain the movement in the mind of the athlete, so it can be done without thinking.
   b. Oral and tactile feedback helps the athlete correct improper technique immediately and establish the pattern as accurately as possible.

2. **Targeted Flexibility Training**
   a. Sometimes a pattern cannot be established if an athlete has trouble achieving the position due to tightness across major joints (ankles, knees, hips, shoulders, elbows, and wrists).
   b. While we practice the patterns to perfection, we provide mobility exercises and stretches to improve range of motion. New range of motion allows athletes to achieve positions they could not perform in the past.

**Total Body Strength**
Developing high quality movement patterns inevitably strengthens the musculature, joints, ligaments, and tendons. Once movement quality is established, with the commensurate increase in strength and control, we can start concentrating on building greater amounts of strength. Perfect movement and proper development of connective tissue is required to gain meaningful levels of strength. Strength training with teen athletes requires careful planning, awareness of individual development, and patience. Every athlete will not progress at the same rate. That means we must adopt strategies that protect the athletes while inducing the neural and structural changes that lead to gains in strength.

**A Note About Traditional 1 Rep Max Testing**
Athletes should not attempt a true one repetition max test until they’ve accumulated two years of consistent training. The most important reason why it is not prudent to max test is that it carries the highest level of risk during training, especially in team training scenarios. One rep max testing is also physiologically unnecessary for adding strength for new trainees.

**Total Body Power**
Many sport outcomes are decided by who can produce the most power. If you can generate the same force as your opponent, but you can do it faster, then you have an advantage. We can specifically train for power once a proper foundation of movement quality and strength has been established. Fortunately, power is not developed in a vacuum, and therefore it is not neglected while the foundations are being laid. Power is a percentage of total strength. Studies show that the nexus between max strength and speed of movement (i.e. Power) is 60% of absolute strength for a given movement.

Younger athletes experience the largest increases in power when they get stronger. Our programming doesn’t neglect power building exercises, but incorporates them judiciously to complement their growing strength. Power movements like the Clean or Snatch require significant time to teach properly. Furthermore, it requires much more flexibility and stability than most strength building movements, especially in the shoulder, elbow, and wrist. Time spent teaching pristine power movements reduces
time for training strength and increases the risk of injury while athletes figure out how to move barbells fast. Since, our time with young athletes is limited, we opt for movements that provide great returns on investment, can be intuitively learned, and reduces the chance for injury. Exercises like med-ball throws and box jumps can greatly enhance power, reaction times, and athleticism, while also being extremely low-risk when programmed properly.

**Agility**
Agility can be described as the ability to accelerate, decelerate, and change directions. Agility training gets a lot of focus from the mainstream fitness industry, Instagram, and Facebook. This is because it can be novel and fun, as demonstrated by highly advanced athletes who make it look easy. The truth is that most young athletes do not need specific agility training. Practicing and playing their chosen sport(s) more than make up for a lack agility training in the gym.

**Plyometrics**
Everything written about agility is also relevant for plyometric training. Box jumping, hurdle hopping, bounding and other such jumping tasks, all require some base level of muscular strength to excel at the movement. Plyometrics also put tremendous stress on the joints, ligaments, and tendons, so time must be taken to make sure these structures are strong enough to withstand the strain of repeated bouts of training.

We can incorporate low intensity plyometrics at a very early training age. They must be progressed carefully to avoid damaging growing structures. Landing mechanics, 1 leg hopping, broad jumps, and low box jumps are all examples of low intensity plyometric exercises that elicit big gains with minimal risk. As strength, coordination, and structural integrity of joints, ligaments, and tendons improves, more intense activities can be added to the program.

**Peak Performance**
The best outcomes occur when athletes adhere to the peak performance pyramid and prioritize their training in the correct order. Movement quality alone can lead to immense changes in an athlete’s career, regardless of whether they retire as high school seniors or as 40-year-old professional veterans. In the high school setting, we are usually lucky to work with a group of kids for two years. We are extremely lucky to work with some for 3 to 4 years. During that time, kids have many breaks: vacations, travel ball, sickness, in-season competitions, injury, forced downtime, and other life commitments.

It is imperative then that the time we have is not wasted. Skipping steps of the pyramid in an attempt to artificially accelerate progress actually sets the athlete back significantly, as one must descend back down to break bad habits, then climb back up again. College strength coaches are aware of this problem. In fact, they would prefer that an athlete have no high school coaching rather than some poorly executed coaching that the college coach then as to fix. SHP students are way ahead of their peer-group, because they receive thoughtful and consistent coaching while they attend school here.

In all honesty, peak performance for high schoolers is a relative term that depends heavily on the student athlete’s goals and desires. We try to fully prepare them for the rigors of life beyond high school,
whether then continue their athletic career or not. Peak performance truly means that we are giving them the opportunity to be their best, every day, for every endeavor.

**Putting It All Together**

Below is an example of a training program designed for an SHP athlete. The program incorporates many of the previously discussed concepts. This section will discuss each element of the plan and how it’s implemented in the gym.

### Elements of the Plan

- **Header:** we build each program for the specific needs of the sport. This particular program is an off-season plan for girls’ volleyball.
- **Name:** each athlete has their own card to record their progress and make notes.
- **Phase:** for record keeping, it is prudent to know what phase of training this plan represents. AA+ is a designation for Anatomical Adaptation, meaning that the emphasis is on preparing the body for the rigors of continuous training.
- **Position:** most young athletes have the same program as their teammates, but we may modify the program when one position has somewhat different functions than the other positions. For
example, this card may be modified for a libero, or a soccer card might have a modified plan for the goal keeper.

- **Calculated 1RM**: once the trainee reaches a level of strength that can safely be tested, the number can be recorded in this space for record keeping and programming purposes.

- **Prep**: most sessions will begin with the prep box. It includes soft-tissue work (foam rolling), mobility, and activation (warm-up). This box is usually truncated to soft-tissue work and mobility when the athletes come directly from practice (because they are already active and warm).

- **Exercise**: exercises are chosen based on a needs analysis of the sport
  - **Main Movement**: this exercise owns a whole box because it is the most important exercise for that block. In this case, the exercise is paired with a low-level plyometric. The numbers (2:2:1:1) represent the desired tempo for the movement. Each number corresponds to a specific part of the main movement. So, in the squat, starting from the standing position, the first number would represent the time to get from top to bottom, the second number represents the time spent frozen at the bottom, the third number represents the time from the bottom of the movement to the top, and the fourth number represents the time in-between repetitions.
  - **Paired Exercises**: the next three exercises are to be done as (active rest) for the squat. The usually consist of three of the following exercise subgroups: core, a supplemental exercise (in this case a hamstring dominant movement we call the 1 Leg RDL), mobility, activation, and stabilization.

- **Wk1-Wk4**: each program is usually three to four weeks in duration. Each column represents the repetitions and sets required each week. How these are manipulated week to week is based on our training goals.

The bottom of each day has a special section where we can monitor recovery. The area is also available so the athletes can take any notes about their training session.

- **Sleep**: we recommend 8+ hours of sleep per night (although this does not show an entire week’s sleep pattern, it provides a snap shot so we can have a discussion if we consistently see numbers lower than 7 hours).

- **Hydration**: we recommend a minimum of $\frac{1}{2}$ their body weight in ounces.

- **Nutrition**: for boys, we are looking for a range of .7g-.8g per pound of body weight. For girls, we ask for number of protein containing meals per day.

- **Stress**: a subjective number to help us gauge the total stress load of the athlete.
• **Soreness/Fatigue**: another subjective number to help us gauge recovery. It also helps the athletes get more viscerally in-touch with their bodies.

Miscellaneous Elements:

• **Body weight**: this box has only been used for the boys, since being heavier is an advantage in many boys’ sports. The benefit is not as strong for girls’ sports, so strength enhancement is the main goal.

• **Quote**: the quote is used to focus the group, create comradery, induce excitement, and inspire the athletes.

• **Misc. Block**: we leave space for educational purposes, and goal setting, so the athletes can see key information everyday.

**How to Use the Plan**

The athletes always work top to bottom, one block at a time. A block consists of a main exercise and 3-5 paired exercises. The exercises complement each other, so they must be performed together. They also constitute as active rest for the main and supplementary exercise(s). Depending on the phase, different exercises will have different levels of emphasis based on the amount of sets performed in the block. They repeat the top to bottom process until all reps and sets are complete. Then they may move on to the next block on the program.

Each block represents a different need based on their sport. Every block should balance all the other blocks based on push-to-pull ratios, hip-to-knee ratios, and core equilibrium. Research shows that a balanced athlete is less prone to injury, especially of the non-contact variety.

**Conclusion**

The process of making a strong, powerful, and healthy athlete is not an easy one. Each individual is different, which makes a cookie-cutter approach untenable. Balancing health, strength, and sport prowess relies on many factors: correct technique, appropriate loading of volume and intensity, proper recovery from training, sport practice, nutrition, hard work, resilience, passion, maturity, a growth mindset, and dedication to meeting one’s potential. Some of those factors are within our purview as coaches, but many are not. We bring all our resources to bear on the factors within our control, so we can help every student at SHP reach their goals and meet their potential on and off the field, in and out of the gym, in school, in life.