

# Athletic Development

## Defining the Discipline

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## Introduction to Athletic Development

The term *athletic development* is preferable to *strength and conditioning* because it denotes an integrated system to enhance athletic performance. No single component of conditioning can be solely responsible for the athletic development of any team or individual.

Each sport has unique demands in terms of conditioning. A collision sport like football has special needs that emphasize heavy weight training and development of muscle mass for protection and performance. A non-contact sport like baseball has very different needs, such as speed, high degree of coordination, etc. The sports represent a spectrum of demands that must be reflected in the athletic development programs of each sport. A sound program must be designed to meet the needs of each sport with a balanced development of all components of physical performance: strength, power speed, agility, endurance and flexibility.

The athletic development program will produce the complete athlete. Sport science is the framework and the art of coaching is the application. Execution of this approach requires detailed planning and preparation with everyone involved committed to the same goals and objectives for effective implementation. It represents a paradigm shift with the premium on systematic, sequential development of all athletic qualities. There are no shortcuts. It is a progressive step-by-step process that will result in a higher level of consistent athletic achievement.

## **Strength & Conditioning – Historical Context**

Strength & conditioning originated in the mid 1970's in American football. By the late 1980's virtually every major university had strength and conditioning programs. In the mid 1990's, in recognition of the different needs of the other sports, many schools created a separate division within S&C between football and the Olympic Sports. Despite this division the training methods employed for football were the methods used for other sports; it was a one-size fits all approach with minimal emphasis on the other components of athleticism. In addition, S&C and sports medicine have been separate entities with very little crossover and cooperation.

## **Athletic Development – Mission Statement**

To enhance athletic performance through a systematic, sequential and progressive approach to the total conditioning process in an environment that ensures success in athletics and life.

## **Athletic Development – Goal**

To instill a culture of daily physical preparation that grows & nurtures adaptable athletes who understand the wisdom of their bodies, its ability to self organize and solve movement problems. At the end of the journey all physical limitations are eradicated and the athlete is ready technically, tactically, physically and psychologically to compete to win under any conditions and in all circumstances.

## Athletic Development – Means of Implementation

**Sport Demands Analysis Profile (SDAP)** - Based on the profile a specific program is developed for each sport reflecting the demands of the sport and the position or event. The sport coaches must be active participants in this process so that they have ownership in the development of the program.

**Sport Injury Profile (SIP)** - This is developed by the sports medicine/rehab personnel to outline and review the common injuries in each sport, how they occur, and the time frame for the rehabilitation process. This information is then used to develop a specific prevention program for each sport that is then included as a transparent part of the training program.

**Physical Competency Assessment (PCA)** – This is an assessment tool designed to evaluate each athlete’s basic physical competencies in fundamental movements to determine their level of training readiness.

**Comprehensive Athletic Testing (CAT)** - Each sport has a specific test battery to evaluate the athlete’s fitness for that sport. Results would be compiled in a central database to track progress, establish baseline performance standards, and track the individual athlete’s improvement.

**Individual Athlete Profiles (IAP)** - This involves longitudinal tracking of all physical performance parameters and medical history during their career. The IAP would serve as a reference for future seasons, feedback, and motivation.

## **Athletic Development – The Concept**

The body is a kinetic chain with movement occurring from toenails to fingernails. A sound athletic development program emphasizes integration of all the links of this chain. We must remember that the goal of athletic development is to enhance performance and prevent injury by developing athletes that are completely adaptable to the competitive demands of their sport.

## **Athletic Development – The Process**

The athletic development model as detailed below outlines the steps in the process of a comprehensive sport specific conditioning program. The model is a principle-centered approach that forms the foundation of all program design. The program, process and principles are based on scientific laws, functional movements, and practical experience, all designed to develop the complete athlete.

Each program takes into account individual athletes' needs, team and season goals as well as any other objectives that the coaching staff wishes to accomplish for that season or training year. It bears repeating that the development of the training program is a team effort involving input from the sport coaches, athletic development staff, sports medicine staff, and the athlete.

Actual program development is a five-step process:

### **Step One – The Sport**

Conditioning requirements and game demands vary from sport to sport. It is also necessary to take into consideration the position or event within the sport. The overall training program must reflect differing demands in strength, movement speed and direction, and specific fitness requirements.

### **Step Two – The Athlete**

The program must account for the different physical qualities that each athlete brings to their sport. PCA and CAT

### **Step Three – The System**

The components of the system are:

#### **Work Capacity**

The ability to handle a workload and recover from that workload.

#### **Speed**

Perhaps the most important of all athletic qualities, this can be significantly improved with a systematic program.

#### **Strength**

Simply the ability to exert force, measurable strength.

#### **Power**

The ability to express force in athletic movements.

#### **Agility, Balance, and Coordination**

The ability to start, stop, change direction and control the body.

### **Step Four – The Plan**

No system can be implemented without a plan based on measurable goals and objectives. The plan must account for the

various phases of the training year and distribute the work accordingly. The phases of the training plan are:

**Introductory**

A short period to orient and teach techniques as well as establish the routine of training

**Foundational**

The base period where the emphasis is on increasing work capacity

**Specific Preparation**

The application period where the base work is applied to the demands of the specific sport

**Competition**

To fine tune some components and begin to stabilize others

**Peak Competition**

A period to sharpen and “peak” with an emphasis on important competitions

**Transition – Review, Rehearse & Refresh**

“Active rest” where fitness is maintained. It is a period of refinement, correction and learning to take advantage of peak fitness and use this time to correct technical flaws and rehearse and practice new techniques or training methods that will be introduced in the next training year.

**Step Five – Testing and Evaluation**

Testing establishes a baseline for beginning a training program and for setting goals. In addition testing allows the coaches and athletes to measure progress in the athletic development program.

## Athletic Development – Foundational Principles

Dynamic postural alignment and dynamic balance are the foundation for all training

Train movements not muscles

Train fundamental movement skills before sport specific skills

Train postural (core) strength before extremity strength

Train body weight before external resistance

Train joint integrity before joint mobility

Train strength before strength endurance, power before power endurance

Train speed before speed endurance



## Athletic Development – Training Guidelines

Train sport appropriate - You Are What You Train To Be

Have a Plan, Execute It, and Evaluate It

Build the Complete Athlete  
All systems work together

Train all components all the time - Use It or Lose It

Build the Athlete from the Ground Up & Center Out

To Be Fast You Must Train Fast

Build a sport appropriate Work Capacity base

Train Toe Nails To Fingernails - Stress Linkage

Training is Cumulative - Win the Workout

A sound training program must address individual needs.

Biological age and gender must receive strong consideration

## **Athletic Development – Critical Factors**

- Commitment to shift from the traditional paradigm of strength and conditioning
- Qualified staff committed to the same goals
- Willingness to innovate and continue to “think outside the box”

## **Summary**

A systematic athletic development program that progresses the athlete throughout their career has the potential to significantly upgrade the performance of all athletes