

# Training for Home Run Power

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As our national pastime, baseball is probably the sport that conjures up some of the greatest emotions of nostalgia and deep history. As much as the game has progressed over the past 100 years plus, many old beliefs about preparation and conditioning remain steadfast and unchanged. From swinging weighted bats, to multiple bats at once, to smacking old tires in the garage, many young players have spent hours trying these long-standing methods to develop the long ball power of greats like Ruth, Mantle and Aaron.

The purpose of this article is to apply a systematic analysis to the demands and considerations of the baseball swing and how it may be improved through an integrated strength and conditioning program.

## *The Elephants in the Room*

Unfortunately, it is nearly impossible for you to turn on the television or open a newspaper or magazine and avoid the scandalous steroid issue in baseball today. Driven by intense competition, money and an ESPN highlight mentality, many ballplayers resort to taking illegal performance enhancing drugs to try and get the edge on their competition. This issue reaches far beyond the scope of this article, where our focus will instead be the development of hitting power *NATURALLY* through hard work and critical thinking.

## *Skill vs. Ability*

An incredibly important factor to first consider is the difference between skill and ability. Skills are taught by coaches, and are specific to the sport and the intricacies of the strategy and craft of playing the game. Abilities are the elements which allow an athlete to best express their skills and include balance, flexibility, strength, power, stability, etc.

## *Mastering Full Body Rotation*

Human movement occurs in one of or a combination of three planes: front and back, side to side and in rotation. Hitting obviously requires a tremendous amount of ability to rotate the trunk and shoulders.

A great analogy that I teach rotational athletes is that of the Rubik's Cube. A fad puzzle game that was popular in the mid-80's, the Rubik's cube is composed of three independently rotating layers. These three layers are similar to the three rotational sections of the body:

- 1- The head & neck
- 2 - The trunk
- 3- The hips and legs

There are a multitude of combinations in which these components can be rotated, such as the head over a fixed trunk, the trunk under a fixed head, the trunk over fixed hips and legs, the hips and legs under a fixed trunk, etc.

The most important key to these various combinations is that each segment can move independently. For example, if the trunk cannot rotate without having the head stay fixed, the batter will inevitably pull his or her head off of the pitch and "bail out" on their swing. The other significant factor is that the greater that these parts can counter-rotate (go in opposite directions independently), the more power that can be created due to the "winding" effect, much like a rubber band propeller on a toy airplane.

## *Overpatterning: The Path to Pain and Poor Performance*

The continual practice of swinging from one side of the plate is a necessity for mastering the craft of hitting; however, can also lead to problems in the symmetry of the musculoskeletal system. The thousands of explo-

sive rotations in one direction will lead to the adaptation of certain muscles to become tight and/or overactive, causing an asymmetry, especially in the muscles attaching to the spine. This can lead to altered joint mechanics, which will eventually lead to pain and structural breakdown.

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One way to help counteract this “overpatterning” is to train rotational patterns opposite of what is natural with more volume during the competitive season. For example, a right handed hitter rotates from right to left in his or her swing. Their training program would then have a 2:1 or 3:2 ratio of rotational work from left to right to keep their muscular balance in check. This will not take anything away from their swing, and in most cases, will only enhance it.

### *Weight Shift and Balance*

The epicenter of the human body is located at the belly button, where our center of gravity lies. This is why there is so much emphasis on the development of the “core” musculature, referring to the muscles that control, move and stabilize the trunk and spine.

During the various stages of the hitter’s swing, the balance of body weight will shift from the front to back leg in both a side to side and rotational pattern. This must occur fluidly and reactively as the hitter must be able to adjust his or her swing to the plane and speed of the pitch. These adjustments must be made in where it allows the hitter to not “over-lunge” and lose their base of power.

One exercise that has great carryover to enhance a hitter’s ability to maintain this balance and fluidity is the Lunge exercise. This teaches the athlete to be able to decelerate, adjust to momentum and the forces of inertia and gravity, and stabilize his or her hips and torso in all three planes. It is imperative that the lunge be trained not only in the traditional front to back pattern; but in the side to side and rotational planes, as well.

### *The Mighty Chop*

The Wood Chop exercise is probably the one exercise that has the greatest translation to rotational power. The Chop addresses the rotational components mentioned earlier and can be done with a variety of training tools (medicine balls, cables, tubing, dumbbells) and can also be done at various speeds. The goal is to train the body to initiate power from the midsection which will be expressed through the shoulders, arms and finally the hands.

*The goal of The Chop pattern is not to simulate your swing with resistance! Trying to replicate your swing with additional resistance will hurt your swing more than it will help.* The reason why seasoned hitters take thousands of swings is so that that the “perfect” swing becomes engrained in the nervous system. Adding additional resistance to that which your actual bat and gravity would give will begin to cause alterations in this fine motor programming, leading to “hitches” and compensations in the swing you are working so hard to perfect.

### *Grand Slam Hands*

Once it has been properly trained that the power of the swing is generated from the midsection, then the icing on the cake is to attach the core to a powerful set of wrists and forearms. The lower arms must be trained to not only grip the bat, but maintain the plane of the bat during the swing and create additional inertia upon engaging in the swing.

In addition to various gripping and grasping exercises, a great exercise for swing strength is various hammer exercises. Using a long object such as a stick or broom handle, practice doing full range of motion hammering and rotational actions. The length of the shaft will create greater demand for acceleration and deceleration. Progressively adding a light to the end of the shaft will provide a continual training effect.

### *Conclusion*

Taking an “outside of the box” approach to strength training can create dramatic improvements in the power and quality of a hitter’s swing. The key to success is to make sure that the program is progressive, based on the abilities of the athlete and follows these simple steps:

Balance and coordination before strength

Create strength in the core before the extremities

Develop strength at slow speeds before progressing to more explosive training

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