WAKE UP GOLF

Disclaimer

This book is not intended for the treatment or prevention of disease, nor as a substitute for medical treatment. Programs mentioned herein should not be adopted by any purchaser without review and consent with your health professional. The authors are neither responsible, nor liable for any harm or injury resulting from these programs or the use of the exercises described herein.

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Introduction

Every golfer wants more distance. Ask any short hitter off the tee. What would an extra 20, 30 or 50 yards mean to you and your game? You would play better, likely drop your handicap and even gain some self confidence along the way.

You could be a male or female, young or old, low handicap or high. You could also be a tour player, distance competitor or recreational player.

While it might be easy to find a tip or two on how to hit it longer, I have yet to find a product that focuses on all aspects of the long drive including technique, drills, exercises and stretches that all work towards that goal.

Most people understand that in order to hit it long, power must be generated.

That is where the clarity ends and the confusion begins.

Exactly how is power generated? How do you train for it? How much of it is due to size and strength? How much of it is the result of precise technique?

After an exhaustive search of golf articles, videos and instruction manuals, and personal interviews with long drive hitters, we share the common traits among all big hitters. We also share the techniques, drills and exercises to help you get there.

Here's to hitting it long…

PRINCIPLES OF DISTANCE

This book will lead you to *only one conclusion* regarding your question about how to achieve maximum distance off the tee….

Are you ready for the answer?

The answer is to achieve **maximum club head speed through impact**.

That's the honest and simple answer. There are more details like optimizing the launch angle, spin rate and ball speed. And, it can get overwhelming quickly with angles, statistics, and theories.

At the end of the day, working towards improving your club head speed through impact is the single biggest factor that most amateur golfers can influence and in the shortest amount of time.

In this book you will learn some drills and exercises to help you create the right angles, positions and acceleration techniques to get you there.

Each separate piece of advice and every single drill only serves to support this one theory and this one objective. Now that we know the answer, let's get to the specifics on how to get there.

No matter which long drive hitter you listen to or follow, these basic principles are among the top foundational principles of distance.

Principle #1:

A Big Shoulder Turn

The most accepted rule is to have a 2 to 1 ratio for your shoulders vs. hip turn. That typically means a 90 degree shoulder turn and 45 degree hip turn. Butch Harmon once described Tiger Woods' ratio as 3 to 1 with a 90 degree shoulder turn and 30 degree hip turn. Some might say it was the stress of his old swing on his spine that caused years and years of back trouble, surgeries and rehab. In any case, a big shoulder turn is a basic requirement.

Principle #2:

Solid Leverage

There are several places where golfers use leverage to create distance.

- **Lag:** Lag refers to the angle of the shaft relative to the position of the hands/wrists at impact. The hands return to the impact position first

while the club head lags behind. Whatever core speed you generate on your downswing, it is multiplied by the lag you release at impact. The key is to not release your lag until you get to the impact zone.

- **The Rule of 90's:** At the top of the swing, your shoulders will form a right angle. Your club will also form a right angle at the top.

Principle #3:

Good Balance

A good swing is balanced. It is not on the toes or the heels. It is not leaning back and it is not leaning forward. It is balanced in every respect of your contact with the ground and allows you to have strong dynamic control.

It also takes on a different meaning when you talk about the balance of the body. It is also in balance. We will share bilateral training drills with you a bit later. However, your upper body should not over power your lower body and you should not have tight joints moving against more limber areas. A good swing will have strength and flexibility on both sides.

Principle #4:

Center Contact

All golfers know about the sweet spot. Your chance of hitting the perfect drive will always hinge on your ability to have the perfect swing. Golfers spend a lifetime in search of this quest. It is the reason we buy new clubs, take lessons and ask advice. “What am I doing wrong and how can I fix it?”

There are 9 laws of ball flight. They cover everything including a push hook, slice, push hook, push slice, pull hook, pull, pull slice, etc. Make no mistake that hitting it in the center of the cub will add to your ability to ‘optimize’ for the perfect drive. However, searching for the perfect swing also sends you down a long path of perfection seeking wisdom which takes time. For this reason, this book will focus on the one thing that you have the most control over and you can change almost instantly….and that is swing speed.

Principle #5:

Swing Speed

We know with certainty that golfers can increase drive distance by training for speed. You can do this with simple golf drills and enhance your results with exercises and stretches that support your efforts. The good news is that it takes very little effort and time to improve. You just need to know what to do. That's what this book is for!

A TALE OF TWO LONG DRIVERS

As I was completing my research, I couldn't help but notice the ridiculous difference between two noteworthy long distance hitters.

Mike Dobbyn vs. Justin Thomas

First, meet Mike. Mike is a professional long driver on tour and is the current world record holder of the long drive at 551 yards. Oh…and…he's huge!

Mike is 6'8 and 310 pounds. He's crazy big…are you with me?

Next up is Justin Thomas. Justin is a new comer on the PGA Tour. He is 23 years old, 5'10' and 145 lbs. Yet…his longest distance recorded is **413 yards** at the Bridgestone event.

Mike's more average drives are closer to the 400's making them more equal than you might expect. This is the 'illusion' of the long drive. Most golf experts believe that Justin Thomas is pound for pound, the longest hitter in golf today.

Not surprisingly, <u>they both employ the same distance principles.</u>

Here are two more revelations about distance principles.

- They both use width and extension to their advantage.

The terms "width" and "extension" are both used to explain the distance between your hands and your torso during your backswing.

By extending your arms away from your body is the way to achieve this. Think in terms of leverage! The farther away from the ball your hands are at the top, the greater the leverage.

And what does greater leverage do for you? That's right...more clubhead speed!

Where can the body break down and take some of this leverage away from you?

-Excessive bending at the left elbow

-Poor weight transfer
-Lack of good core strength
-Poor spinal rotation

Big hitters all have good “width” and "extension".

- All big hitters have a second leverage point at their trail arm at setup. Notice how the left arm is on top of the chest. The secret is training the upper arm to stay connected to the chest.

You can see it with John Daly too.

Notice the left arm set above the chest at set up. The big shoulder turn. The width. The extension.

UNDERSTANDING VELOCITY

Understanding Velocity

Club head speed or velocity is a key to ball flight distance and is considered a primary mechanical characteristic of the long hitter in golf. From a scientific standpoint, the velocity created as the club travels through the impact zone has the greatest influence on ball flight distance.

The greater the club head velocity at impact, the greater the ball velocity, and the greater the flight distance. The club head velocity at impact is directly affected by the forces on the club during the downswing and the time over which those forces act.

The difference in the speed at which the ball leaves the clubface at impact is due mostly to the muscular forces the golfer applies to the club—more than any other factor!

The velocity that is created as the club travels through impact directly influences the distance the ball will be propelled as well as the trajectory and shape of the resulting shot.

The bottom line is if we can **directly increase club head speed at the point of club to ball impact we can affect distance of the shot.**

Therefore, velocity training must be recognized an important component when developing a golf-specific training program. For today's golf athlete, especially those playing on the professional tours, club head speed or velocity is a necessary and essential variable for success.

There are a number of physical variables which control and determine the velocity a golfer can create. These include proper swing mechanics, flexibility, strength and speed. Training or improving any of these individual variables can directly affect the golfer's ability to increase velocity. A comprehensive training or conditioning program designed to increase club head speed must

address all these variables. The benefits of proper golf instruction, flexibility exercises and strength training for golf have all been well documented. *The missing link in golf fitness may be training for speed or velocity!*

The bottom line is if properly implemented with a training professional a velocity training program can equal longer flight distance and lower scores.

Here's the formula:

↑ Muscle forces applied by the golfer + ↑ Club head velocity at impact = ↑ Ball velocity = ↑ Flight distance.

To develop speed a golfer must develop both linear and angular velocity without disrupting normal swing mechanics. Angular velocity is the velocity of the club as it moves through the swing plane and is directly influenced by a golfers' ability to maintain lag or the angle between the forearm and club. Linear velocity occurs in a straight line and is influenced by the golfers' ability to control lateral or side-to-side movement during the swing.

The challenge in golf is to increase angular and linear without disrupting normal swing mechanics. The key to increasing these velocities is to improve the efficiency of the swing. Proper golf technique or mechanics can directly affects this variable.

By moving in the correct sequence during the swing motion (i.e. pelvis first, followed by torso, shoulders, hands, and finally the club) velocity of each body segment can be increased and properly coordinated. This is why it is important that during a golf-specific training program the designed exercise program must reinforce the proper swing motion and sequence.

A golfer also needs to understand the concepts of sport loading and consider the best way to use the concepts of under-speed and over-speed training to

increase club head velocity.

Sport loading makes use of the **"specificity of exercise"** concept. Sport loading basically utilizes specific movement patterns that mirror the golf swing with the addition of weight, increased load, or by the subtraction of weight, decreased load, added to the club.

If we added more weight or load to the swing it would be called under-speed training because the heavy load causes us to move slower while taking weight away causes over-speed training to occur because we now move faster through the movement.

By using your body's nervous and muscular system characteristics either method can make changes in one's ability to increase the power behind your club head to gain velocity and distance.

Research in other sports, specifically baseball, suggests that training with a weighted implement within 15 – 20 % range above and below the standard weight will result in greater swing velocities than when a standard golf club is used.

Training with weighted implements outside these optimal ranges may even adversely affects the timing or sequence mechanics therefore potentially decreasing club head velocity. This is why many trainers today have stopped recommending use of those heavy clubs typically found in golf retail shops before play.

• The golf swing requires full active range-of-motion! The benefits of a velocity training program may be diminished if exercise occurs through a shortened range-of-motion. A full swing allows for sufficient force to be created over the distance traveled during the backswing and downswing phases of the golf swing.

• A golfer also needs to establish a functional strength training base before starting velocity training. General resistance training is important to first get your body in shape to train.

Velocity or power training requires the connections between your brain and the muscles (i.e. neuromuscular recruitment) to follow a given sequence (i.e. the golf swing).

First, remember that strength is a part of the power equation and that without a strength base, you have no power.

Second, power is generated through the stretch-shortening cycle which requires an efficient neuromuscular system to respond to rapid changes in direction. Power training subjects the muscles and tendons to an overload during the deceleration (eccentric) phase.

Only by building a strength base will you properly prepare the body for this more advanced type of training while preventing injury. Once you have established a training base, the power training must be similar to the actual swing with regard to the movement, tempo, and velocity too assure a proper neuromuscular system response. This is known as "specificity of training".

This means that your training program must be specific enough to the golf movement, that the muscles used and movement speeds mirror the actual swing mechanics. This will allow you to see direct improvements related to your game!

RECOMMENDATIONS FOR TODAY'S GOLFER

Golfers at the games highest level can be defined as powerful! Physical power enables the athlete to practice and master their golf skills. To understand the definition of **Power** from a scientific standpoint we must look at the **Power Equation**.

Power = Force x Distance/Time

Force = *Golfer's physical strength*

Distance = *Range-of-motion or flexibility available to maximize full swing mechanics*

Time = *Time to complete the swing motion* or the golfers' *physical ability to produce club head speed at ball impact*

The **Power Equation** can be applied to golf. From this equation it is easy to see that all three of these variables **STRENGTH**, **FLEXIBILITY**, and **SPEED** each directly affect a golfer's ability to create **POWER!** For any golf-specific power program to be complete it must address all three variables.

COMPONENTS OF A GOLF SPECIFIC POWER SYSTEM

The gym has truly become an essential place for the professional golfer to visit to assure success in their profession. This is the place where science must be applied and the trainer's knowledge of the body is truly tested. The concepts of muscle anatomy, physiology, motor learning and golf are all essential to maximize performance potential. Performance enhancement is not new to professional sports as all four major sports (I.e. baseball, football, basketball & hockey) have utilized trainers, therapist and other medical/conditioning professionals since the early 1970's. Unfortunately, professional golf has lagged behind!

We are excited to introduce and detail these essential training secrets that that will help you build success.

There are basically, **Three Essential Components** to building power.

Without addressing all three aspects you will never maximize potential.

The Three Essential Components

1) Strength Program (core, power, strength)

2) Flexibility Program

3) Speed Training Program

STRENGTH TRAINING FOR GOLF

Strength training has only recently been accepted as an important and integral part of a golf-specific conditioning program. The reason for this new acceptance is directly related to the influence of conditioning programs being used at the games highest levels. *Golfers on the PGA TOUR, have used strength training to transform their physiques, gain lean muscle mass and produce extraordinary performance results!*

Training the musculoskeletal system is essential for golf and is directly related to the pure power required for a long drive as well as the fine motor control and coordination required for a delicate chip shot. Strength training also addresses muscle endurance, which will increase the body's ability to sustain performance through all 18-holes.

For Your Game

Many golfers believe that working with weights can hinder their swings by developing large tight muscles. With proper guidance and technique weight training can help anyone's game. Increased muscle strength can be achieved in several ways including the use of free-weights, weight machines, one's body resistance and resistive bands.

Strength training develops overall body control and endurance, which helps the athlete strike the ball more accurately and consistently. Well-conditioned muscles are less prone to injury and recover faster when injured.

Strength gains are very rapid during the first few weeks of training. These initial improvements are due to the body becoming familiar with the exercise. Long-term benefits of strength training include increased muscle size, which takes much longer (up to 8 – 12 weeks) to occur.

GUIDELINES FOR STRENGTH TRAINING:

a) The exercise must be physically challenging to work.

b) Individuals who are unsure of their medical status or their ability to tolerate a strengthening program should consult a medical professional.

c) Warm-up prior to training.

d) Muscles tend to tighten so stretch before, during, and after strength training.

e) Exercise should be performed slowly with good postural alignment.

f) Consider the "key" training variables including intensity, rest and duration of exercise.

g) Use strength training up to 3-times per week with a day of rest between workouts.

h) Work larger muscle groups before smaller ones. (i.e. chest before triceps, triceps before forearms, etc.)

FLEXIBILTY FOR GOLF

An important characteristic of good health is the ability to move our joints smoothly throughout a full range-of-motion. It is important to maintain our flexibility to prevent injury, alleviate muscle soreness and enhance athletic performance. The golfer lacking flexibility is continually forced to compensate for range-of-motion restrictions. These compensations directly lead to swing

faults, further restrictions or injury.

The ideal golf swing is a relaxed and fluid motion. Without adequate flexibility the swing takes on a shortened, choppy or stiff appearance. The golfer who lacks flexibility is under a handicap that can increase scores and the risk for injury.

Stretching is an important component of any fitness regime, especially a golf-specific conditioning program. Stretching should be utilized before, during and after practice and play however we are aware that most people will just not take the time.

Some individuals may have more success by dedicating specific short session to flexibility training. By stretching 3 - 4 times per week for just 20 minutes per day, significant changes can be made by individually isolating and lengthening the muscle groups used during the swing motion. The key areas for golf include the back, hips, shoulders and neck.

HOW IS A MUSCLE STRETCHED?

Muscles are typically stretched by moving the extremity across a joint in the opposite direction that occurs when the muscle contracts. Some golfers have excessive mobility at the joints and are able to move the joints beyond their normal ranges. This is known as hyper mobility. Golfers with hyper mobility should avoid additional stretching at those joints because the joints can become unstable and result in injury. Optimal stretching requires very specific techniques.

STRETCHING GUILDELINES:

a) Muscles should be stretched to the point of mild discomfort, but not pain.

b) Stretching should be completed before, during and after practice, play or training.

c) Each individual is genetically different and the ideal stretching program needs to be personalized to meet that individuals goals. This means if YOU have tight shoulders, please spend more time on your shoulders. If YOU have a tight spine, you should spend more time stretching this area.

SPEED TRAINING FOR GOLF

This is the key addition to your current workout plan! In fact, increasing distance off the tee is the most common reason why a golfer will start a golf-specific conditioning program. In order to hit the ball farther with the same club a golfer must increase club head speed or better coordinate the movement directly leading to better ball contact.

<u>There are several ways to increase club head speed</u>:

1) <u>Improving technique</u> –improve timing and release through ball impact. Maintaining the angle between the shaft and the forearm as the golfer approaches the ball has been shown to increase club head speed.

2) <u>Equipment</u> - properly fitted equipment is essential!

3) <u>Fitness</u> – Program developed must concentrate on the development of speed and power.

TECHNIQUES FOR DISTANCE

We have already talked about the basic principles of distance. Our goal is to perform drills which help us understand and execute each of the following:

-Learn how to move our upper body and lower body in sync (this increases our movement efficiency and increases our probability of making center contact)

-Learn how to develop the maximum lag position (this allows us the ability to use the most leverage for distance)

-Develop faster speed using over speed and under speed drills

-Develop better balance in our swing using bilateral training (we will do this from a technical and physical standpoint with drills and exercises)

-Learn how to find our optimal rotation for a big shoulder turn (this will be addressed in the fitness section as it relates to the flexibility in your hips, shoulders and spine.

Lag Drills:

At the top of your backswing you are in your maximum lag position. Your left arm and your club shaft form a 90 degree angle. If you rotate your body to the target without letting your arms drop down towards the ball your body rotation will carry your lag position to the impact zone.

Turn towards the target first, before you let your arms swing down away from your shoulders.

Learning lag is best shown through a series of positions or the rules of 90.

Your shoulders should form a 90 degree angle at the top of the backswing. If you are right handed, check your mirror when you are in your backswing. If you are having trouble getting here, pay attention to shoulder stretches in the fitness section of this book.

Your club should be in a 90 degree angle between your left arm and the shaft at the top of the backswing.

Your shoulders should be in a 90 degree position rotated away from your hips (2 to 1 ratio)

Here is secret 90 degrees or a near perfect L shape of the left arm and club in a prolonged lag position.

Lag Tip: Practice the positions above in front of a mirror. Also practice taking only short swings with a full follow through. Keep your backswing to only a half way back position and follow through at full strength and power. This will allow you to focus on the action and not the outcome.

Whoosh Drills:

Many golfers are familiar with a whoosh drill. It answers the single most important question about lag….

"How do I know where I am releasing my lag?"

There are lots of training aides on the market to help you understand lag. I am not here to promote any particular products for this as many of them work with the same purpose. The popular training devices like the SpeedWhoosh, the Golf Stick, the Speed Stik, etc. all make a sound like a whoosh or a crack so you can get feedback on where your club is releasing stored energy.

Whoosh Drill:

Turn your club head upside down and use your normal grip positioned near the clubhead.

Take a couple of swings and pay attention to where you hear the whoosh sound.

Where you hear the whooshing sound is where your club is traveling the fastest and it is where you are releasing your lag.

If you hear your whoosh at the top, then you are releasing your lag too early. It is also called casting.

If you hear the whoosh at the back of the swing or the bottom of the swing, you are releasing too early. You are stopping your rotation at the ball.

The objective is to move your whoosh as far forward in your swing as possible. The reason is because you still want to be accelerating at the target as you rotate through the impact zone.

As soon as you stop your rotation, your hands will release.

Body Motion Drills:

Hips and legs are the most powerful muscles in the body. As you come down from the top of the backswing, fire your hips as hard as you can. Push off the back leg and on down the line. Notice in the third photo how far forward those

hips are relative to the arms. The hips are well past impact as the arms approach it.

Body Motion Drills:

Here is a long driver at set up. A strong leverage point is to have your upper arm connected (and stay connected) to your chest.

Here is a drill that can help.

Place a towel or club head cover under your left arm. This helps get our body orientation more towards the target. This helps us avoid having a swing

where our arms separate and try to do the work on their own. The arm muscles aren't as strong as using your core to drive the motion.

Start in your address position then take a backswing. When the upper arm comes across your chest, place a towel underneath your arm. This will allow your left arm to stay on top of your chest. Every long driver you will notice has their upper arm connected at impact. Your swing will finish when you are facing your target.

<u>Body Motion Drill:</u>

This will help you build strength and help you build a solid swing plane. It forces you to swing both clubs in balance using your arms, wrists and upper body and allowing the lower body to remain stable. Grip two clubs - one in each hand - and make sure you choke up on the clubs and start with both of them off the ground. Keep your hands a few inches apart during the drill.

Body Motion Drill:

Body motion is the winding and unwinding of the upper body back and through the golf swing. The lower body resists the turning of the upper body in the backswing and this resistance unleashes power at impact.

The coiling of the body around the spine angle controls the weight shift from one side of the body to the other allowing the arms to swing through impact. Pivots are excellent drills to practice because they help you improve your stability, flexibility and tempo.

The pivot is the essence of the golf swing – moving around your spine - and by working on controlling the movement of your body you will have more control of your arms and a better feel for impact.

How to Perform the Drill:

1. Place the club in front of your shoulders and cross your arms and assume your set up position
2. Make sure your left shoulder is slightly higher than your right
3. Feel your left shoulder move down and across, over your right knee
4. Your head will move slightly to the right and your weight will shift to your right side
5. In the transition feel your left knee, left hip and left shoulder move away from your right side and shift the weight to your left side
6. Uncoil the upper body and feel your right shoulder move across over your left knee
7. Finish the drill with your weight on your left side and your right shoulder facing the target.

Bilateral Training Drills:

Your body wants symmetry. With every move you make, one muscle is lengthening while another is shortening. It seeks balance from top to bottom, left to right and front to back. When it doesn't have balance, it breaks down in injury, stress and short and tight muscles. Your body is in a constant battle to try and remain in balance.

Swinging the club on a regular basis and placing the majority of the load on one side of the body is destructive. This is the reason most (if not all) long drivers make sure to train 'bilaterally'.

All this means is that all swings are performed from the right side, then also from the left side.

Speed Drills:

Speed drills are where you can expect to see the most dramatic improvement with your swing speed and distance. Remember this is not about swinging the club hard.

Here are some good tips to keep in mind:

-Hands stay loose, but have a firm grip. (common problems are a weak grip or a grip that is too tight)

-Hinge the club and hold the angle

-Get wide in your backswing and move into a full extension

-Think ‘right elbow to right hip” (backswing to downswing)

-Begin slower on the backswing, then full speed on the downswing

-Speed MUST be at the bottom of the swing

-Keep your nose behind the ball to create the right launch angle

Should you use a weighted club or no weight?

We have all seen baseball player swing a bat while “on deck” in order to make it easier to accelerate their normal bat when facing a pitcher.

Research has shown that ideally the weight of the bat should remain within 15 – 20 % of the player normal bat weight. If the weight is either too heavy or too light the muscles behave abnormally and the benefits of the exercise are lost. A simple way to increase the weight of the club by an appropriate weight is to tape a golf ball to the club face or purchase lead tape from a golf retail shop.

Simply weight your 5 iron. Based on this weight, figure out what an additional 15 – 20% weight increase would be. Place the lead tape on the back of the club head until this weight is obtained. Swing the weighted club normally but concentrate on making the club head “whoosh” as it passes through impact.

Ideally, using a 5 iron other than the 5 iron from your normal set would be recommended.

The more difficult aspect of the program is to obtain a second club that weights 15 – 20% less than your standard 5 iron. This can be often be obtained by utilizing a ladies or senior golf shafted 5 iron.

An alternative method can be to use your normal 5 iron, holding the club upside down with the grip facing down towards the ground. Once again swing concentrating on making the “swoosh noise as the club passes through impact.

Recommended Speed Training Program

Duration: Optimal time-frame is 12-weeks

Frequency: 4 training sessions/week

Warm-up sequence: Standard - Heavy - Light – Standard

Warm-up sequence utilizes dry swings only, 10 repetitions of each.

Concentrate on making the "swooshing sound through the impact position.

Training Program:

Complete 15 swings concentrating on the "whoosh" with your normal 5 iron making ball contact. Do not worry about the ball flight or centeredness of contact during this exercise.

While performing the above exercise program, try to keep your arms as relaxed as possible. Another important tip is to pay special attention to the angle the club makes with your lead forearm. Numerous research studies have shown that maintaining a large angle between the forearm and shaft deep into the downswing is essential to maximize club head speed.

Basic speed training rule: Spend 1/3 of your time with a weighted club and 2/3 of your time with a lighter club

FITNESS FOR DISTANCE

So far we have talked a lot about positions and techniques to create distance. We have discovered that you need a 90 degree body rotation for an optimal turn, good flexibility in the spine for spinal rotation, shoulder flexibility to get to a 90 degree position at the top of your swing, etc.

We also know your core drives the downward part of your swing and serves as the engine of your swing.

We know that golfers need power which is best served by performing explosive movements as part of their training.

Last, we know we need strength and balance from front to back, left to right and top to bottom.

1. Spinal rotation and shoulder flexibility. Every time you swing the golf club, you rotate around your spine. So, what does this have to do with power?

Power is generated every time you stabilize your hips to make a full backswing with spinal rotation. Most golfers have heard of the X factor. This, of course, refers to the differential between the movement in your hips and your spine.

Increase your spinal rotation and a new sense of power will be released. You

also need shoulder flexibility to reach the right position at the top of your backswing. This helps set into motion the proper lag.

2. Core based exercises. Your body's "core", the area around your trunk and pelvis, is where your center of gravity is located. When you have good core stability, the muscles in your pelvis, lower back, hips and abdomen work in harmony. They provide support to your spine.

The core is the power zone. It is where all movement begins. A well-developed core allows for improved force output, increased neuromuscular efficiency, and decreased incidence of overuse injuries.

3. Plyometrics for power. Plyometrics are any exercise where the muscle is contracted eccentricly then immediately, concentricly. Put simply, the muscle is stretched (i.e. loaded) before it is contracted.

According to a recent study published in the National Strength and Conditioning Association's (NSCA) journal, amateur golfers significantly increased their driving distances after just eight weeks of strength training while incorporating plyometrics. Mean driving distance increased 4.3% for the combined training group, with mean club head speed increasing 1.5%.

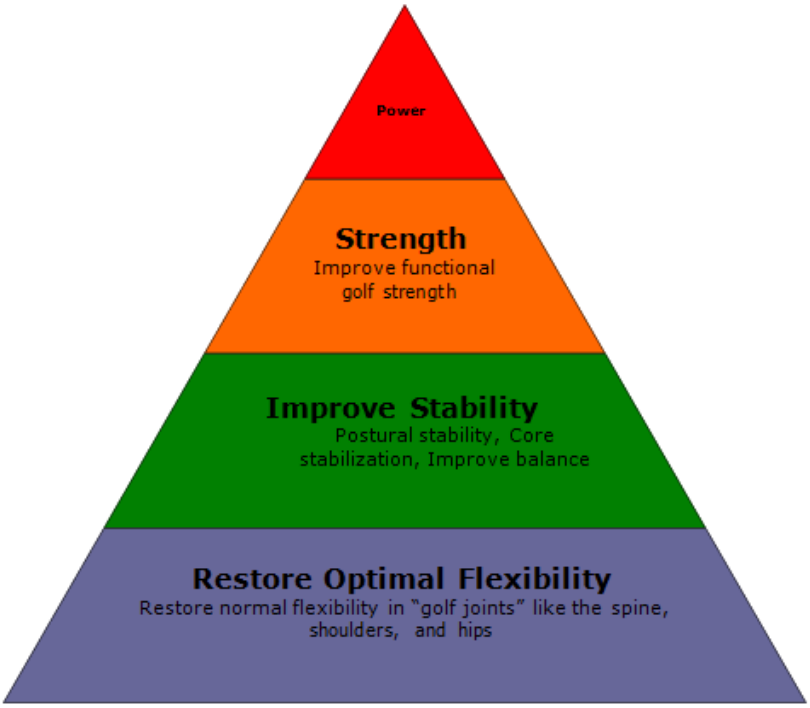
The Power Paradigm

This triangle explains the process of developing power in the body (and swing). You start at the bottom to make sure your joints have the optimal flexibility at the shoulders, hips and spine to generate the power movements when you are ready.

Next...you focus on stability and balance. This includes strengthening the core, postural muscles, and a feel for balance. Once this is set, you progress to dynamic balance which is what you experience in the golf swing. It is also a foundation for building power.

Next…you build functional strength which is also specific to golf. Remember the long drive needs specificity of training so it is time to favor exercises that mimic the rotation and movement of the swing.

Last…your body is now flexible, strong and stable. You are ready to perform more explosive movements and produce real raw power.



Long Drive Workouts

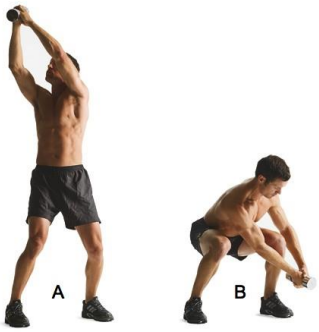
These Long Drive workouts follow the premise of the Power Paradigm and support all the necessary movements needed to produce a long drive. Please follow them in order. The first two programs focus on stability, balance, core strength, and body strength (and balance).

The next two programs add in plyometrics and/or movements that train your body for more explosive power.

Long Drive Workout #1

Perform 12 to 15 reps for each exercise, then move to the next exercise without rest. Rest 1 to 2 minutes at the end of the whole routine, then complete one more round. The number of rounds you complete will depend on your current fitness level and time you have to dedicate. You can perform between 1 to 3 rounds based on these criteria.

Exercise	Instructions	Photo
SB Arm Lifts	Lie on your stomach on a ball. Make sure your feet are firmly planted on the ground. The further apart your legs are, the more support you will have. Extend your arms straight up in a V with thumbs facing up toward the ceiling.	
Hip Lift	Lie face up with your legs bent. Place one foot flat on the floor and pull the other knee up towards your chest with your hands. Push through your heel to lift your glutes off the ground. Keep your abs contracted and your pelvis neutral.	
Hip Adductor Walks	Place a band around your ankles. Begin by taking one step to the right maintaining tension with each step. You should feel this in the outside of your hips. Take about 10 steps to the right, then reverse and take 10 steps to your left.	

Alternating Arms and Legs	Tighten the abdominal muscles and slightly squeeze the buttocks in order to press the small of your lower back into the floor. Alternate arm and leg movements together so the left arm is slowly extended overhead while at the same time the left leg is lifted.	
Reach and Extend	Pick one foot off the ground and lean forward with both hands in front of your body. Keep your mid section tight.	
Sit and Hold (Hold for 10 to 15 sec)	Balance on your glutes while keeping your spine upright. Bring in knees and hold for a few seconds before releasing.	
Reverse woodchop	Start in a squat position with weight slightly over your left foot. Stand up while rotating your arms up and across your body. Extend your arms fully at the top of the movement.	
Core Swings	Place a dumbbell in each hand and put your feet slightly apart with your abs tight. Lean forward and extend one arm forward at a time while the other reaches back.	

Long Drive Workout #2

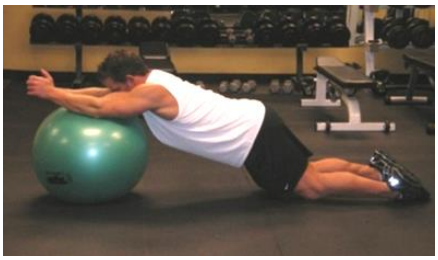
Perform 12 to 15 reps for each exercise, then move to the next exercise without rest. Rest 1 to 2 minutes at the end of the whole routine, then complete one more round. The number of rounds you complete will depend on your current fitness level and time you have to dedicate. You can perform between 1 to 3 rounds based on this criteria.

Exercise	Instructions	Photo
Bench Lunges	Place one leg behind you on an elevated platform (bench, chair). Lower front leg and make sure your front knee is not extending past your front toe.	
Bench Bridges	Lie down on your back with your feet on a bench. Lift your hips up until your body is in one line.	
Chest Press	Perform with one arm at a time. Alternating between sides.	
Seated Shoulder Press	Perform with one arm at a time. Alternating between sides.	

Squat to Press	Place one hand at your side and the other holding a fitness band. Palm is facing down. Move from a squat position to standing while bringing back your fitness band with elbows in.	
Side Shoulder Raise	Place one hand at your side and the other holding a fitness band. Palm is facing down. Start with your hand in front of you then raise it up and to the side as high as possible.	
Side Shoulder Raise II	Same as above except your palm is open and you are raising your arm across your body and up	
Single Leg DB RDL	When performing the Single-Leg RDL make sure to *hinge through the hips* while maintaining a neutral spine throughout the entire movement.	

Long Drive Workout #3

We are shifting to more power based exercises so please follow the number of sets and reps in each box after the exercise directions.

Exercise	Instructions	Photo
Lunge to Press	Perform walking lunges and press a dumbbell or medicine ball above your head with each step Walk 10 steps forward, then 10 steps backward.	
Kneeling Roll Out	You will start with the ball close in to you and your elbows on top. Slowly roll out the ball while you feel tension in your abs. You MUST engage (draw in) your abs on this or it will go to your back. If you feel it in your back, stop and only roll it out until all of the tension is in your abs. Roll out 3 times. At the end of each movement, hold for 3 seconds then bring it back.	
Kneeling Cross Body Pull	Get on one knee while holding a fitness band or cable. Brace your abs, then rotate to one side, bringing the weight back into a row. Perform 10 to 12 reps each side.	

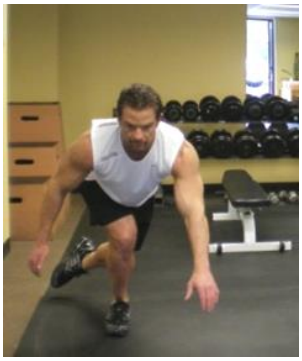
Back Extensions	Place your hands behind your head and bring your upper body up until it forms one line. Do not overextend beyond this before returning to the start.	
Mountain Climbers	Get in a plank position, then bring in one knee at a time while squeezing your butt muscles. Move each leg quickly in a rhythmic fashion. Do this one for 30 seconds.	

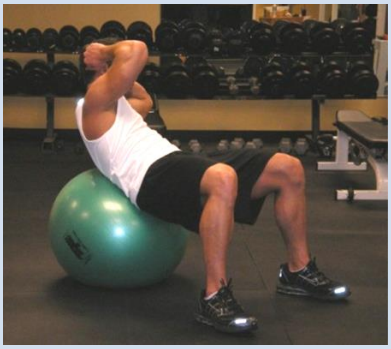
Lateral Heisman	Begin in a standing position with both hands at your side and feet shoulder width apart. Bring one knee up and opposite arm down to meet in the middle of your body. Repeat on other side. Keep moving. Repeat for 30 seconds.	
Squat to Shoulder Press	Place a dumbbell or kettlebell in one hand. Squat down, then push through your heels to a standing position. Your arm should reach all the way up above your head. Repeat 6 to 8 times per side.	

Long Drive Workout #4

We are shifting to more power based exercises so please follow the number of sets and reps in each box after the exercise directions.

Exercise	Instructions	Photo
Forward Lunge with Rotation	Perform walking lunges with a medicine ball. Walk forward 10 to 12 times, then backward. With each lunge, bring the ball across your body and to the opposite side,	
Step Ups	Step onto a bench with one leg (or a stair). Once both legs are up, step back down with one leg. Repeat 10 to 12 times per side.	
Single Leg DB RDL	When performing the Single-Leg RDL make sure to *hinge through the hips* while maintaining a neutral spine throughout the entire movement.	

Sliders	Start with both feet about shoulder width apart and in an athletic position. Take a side step to the left and bring your right foot behind you at the same time. Start very slowly until you get the hang of it. Then pick up speed as you progress. 6 to 8 times to each side.	

Squat Jumps	Move down into a squat, then explode up using your whole lower body. Reach your arms up as high as possible. Perform 3 to 5 times.	
Oblique Crunches	Lie across a ball with your mid back into contact and your abs slightly engaged. Keep your elbows open to the ceiling. Lean your opposite shoulder across your body towards your knee. Perform 10 to 12 reps per side.	
Hip Extension	Lie across a ball so your body is in one line. Feet are about hip width apart. Slowly lower your hips. Keep your head on the ball. Squeeze your glutes and push your hips back up. Perform 8 to 10.	

Flexibility Workouts

There were many exercises above designed to improve your hips, shoulder and spine mobility. Hopefully you will see an increase in movement simply by performing the exercises as outlines. Depending on how tight you are, you may need to spend extra time stretching areas where you are restricted.

I am listing some of my favorite stretches for the back, shoulders, hips and neck. You will need to use some of your own discretion as to how often you should stretch because it depends on your individual restrictions. You should atleast stretch tight areas once a day when you are warmed up and relaxed. This means at the end of an active day or after a walk.

If you are really tight, then you can stretch in the morning and then again in the evening. I have found the best results to come from AIS stretching. This means performing each stretch 10 to 12 reps for only 1 to 2 second holds per stretch (as opposed to holding it for 30 seconds).

Stretch Library

Stretch #1
Shoulders

Grab a golf towel with one hand and place it behind your back. Reach behind with your opposite hand and take hold of the towel. Pull the towel up with the top hand, and then slide the towel down with your lower hand.

Instructions: Perform 10 to 12 repetitions on each side. Move your hand up as high (or as low) as it will go without forcing it. Then take a deep breath in and as you slowly blow it out, see if you can get a little more stretch in this moment. Hold the stretch for a count to roughly 2 seconds, then release.

Stretch #2

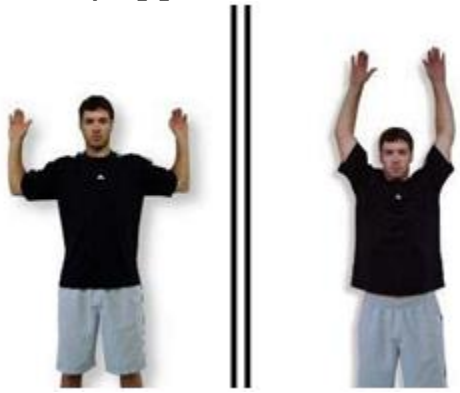
Shoulders/Upper Back

Place one arm straight up next to your head with palm facing forward. Take your opposite arm and bend it across your head grasping your straight arm on the backside of your elbow joint.

Gently pull your straight arm back into a stretch. Be sure to keep your body straight as tight shoulders will want to pull on your whole upper body backward. Keep your stomach muscles taut and posture upright. Then proceed to stretch your shoulder until you reach a place of slight discomfort.

Instructions: Perform 10 to 12 repetitions on each side. Move your hand up as high as it will go without forcing it. Then take a deep breath in and as you slowly blow it out, see if you can get a little more stretch in this moment. Hold the stretch for a count to roughly 2 seconds, then release.

Stretch #3
Shoulder/Upper Back



Place your feet about shoulder width apart and your elbows at shoulder height. Stand against a wall with shoulder blades and hips touching the wall. Contract your stomach muscles and extend your arms straight up trying to maintain contact with the wall.

Stretch #4

Neck and Shoulders

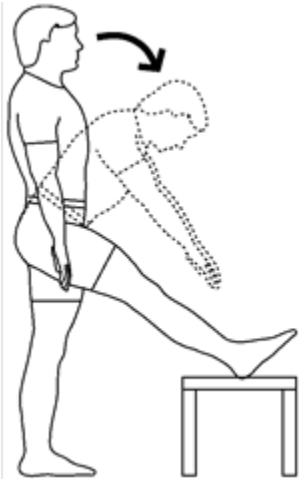
Place one arm around your back at the level of your belt line. Begin the

stretch by turning your head away from the direction of the bent arm. You should feel a stretch across your neck and shoulders. Remember to keep your shoulder blades back and down. Hold and then return to the start position.

Instructions: Perform 10 to 12 repetitions on each side. Turn your head as far to one side as you can. Then take a deep breath in and as you slowly blow it out, see if you can get a little more stretch in this moment. Hold the stretch for a count to roughly 2 seconds, then release.

Stretch #5

Standing Hamstring



Place your leg on a short stair/step stool or chair. Bend the back leg slightly. Bend down with a straight back and bending from the hips. Lean as far forward as you are comfortable. Hold the count of 1 to 2, then return to your start position and repeat.

Stretch #6

Lying Back Stretch

Lie on the floor with your arms and legs extended out. Begin by placing your left leg over your right with the knee bent. Place your right hand on the knee joint and allow the bent knee to reach towards the ground.

Instructions: Perform 10 to 12 repetitions on each side. Take your stretch as far as possible until you feel a natural resistance. Then take a deep breath in and as you slowly blow it out, see if you can get a little more stretch in this moment. Hold the stretch for a count to roughly 2 seconds, then release.

Stretch #7

Lying Glute Stretch

Lie on your back with your legs extended and arms at your side. Begin by placing your right hand on your left heel. Bring your heel towards the opposite shoulder blade.

Instructions: Perform 10 to 12 repetitions on each side. Take your stretch as far as possible until you feel a natural resistance. Then take a deep breath in and as you slowly blow it out, see if you can get a little more stretch in this moment. Hold the stretch for a count to roughly 2 seconds, then release.

Stretch #8

Grab a golf towel with one hand and place it behind your back. Reach behind with your opposite hand and take hold of the towel. Pull the towel up with the top hand, and then slide the towel down with your lower hand.

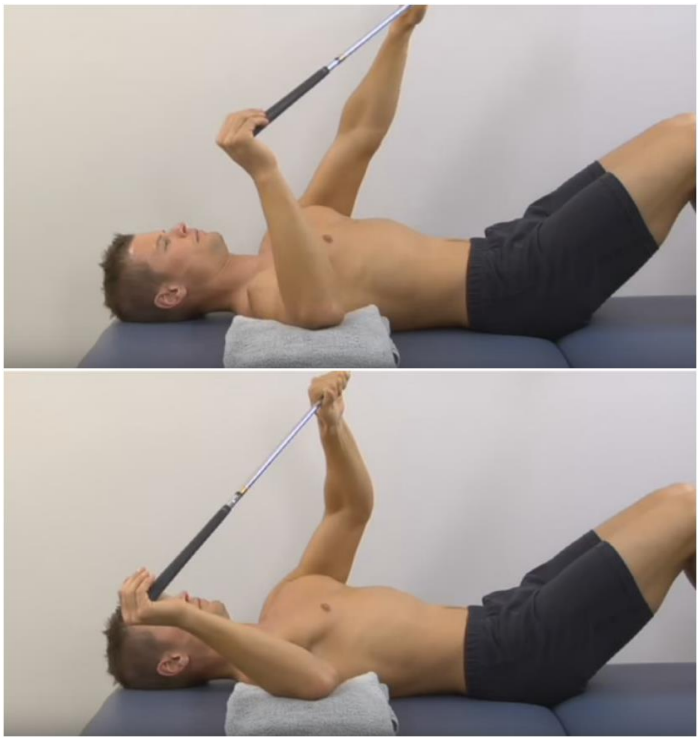
Instructions: Perform 10 to 12 repetitions on each side. Move your hand up as high (or as low) as it will go without forcing it. Then take a deep breath in and as you slowly blow it out, see if you can get a little more stretch in this moment. Hold the stretch for a count to roughly 2 seconds, then release.

Stretch #9
Shoulder Motions

- Scapular retraction: occurs when the shoulder blades come closer together.
- Scapular protraction: occurs when the shoulder blades move further away from each other.
- Scapular depression: occurs when the shoulder blades move downward, whereas
- Scapular elevation: occurs when the shoulder blades move upward toward the ears.

There are 4 movements I want you to perform for your shoulders and neck. They are protraction, retraction, depression and elevation. Perform these movements 6 at a time each.

Stretch #10



Place a golf club in your hands and lie down on the floor with a folded towel as a rest for your elbow. Keep your arm at a right angle as you slowly push the hand back to where you feel tension. In the photo above the left arm is gently pushing the right back. Please perform this stretch on both sides.

Instructions: Perform 10 to 12 repetitions on each side. Move your hand as far back as it will go without forcing it. Then take a deep breath in and as you slowly blow it out, see if you can get a little more stretch in this moment. Hold the stretch for a count to roughly 2 seconds, then release.

Pre Round Warm Up

The same areas will need to be warmed up. You only need a few minutes on the range. Here is an example of an actual warm up from a current long drive hitter.

Shoulder rotations using a longer stretch stick.

Hamstring and low back stretch.

Upper and lower back warm up.


Shoulder warm up.