

WATCH



Poetry in motion: the repeating rhythm with which Lydia swings the clubhead is the first lesson for all golfers

LYDIA KO!

Rhythm, balance, grounding, core control, the synchronisation of hands, arms & body – you have all this and more to learn from one of the world’s hottest young players

Analysis by David Leadbetter & Jean-Jacques Rivet

Photography by **Matthew Harris** | Shot on location at ChampionsGate, Orlando, Florida

New Zealand’s Lydia Ko is 5’ 5” tall. The women’s world’s No.1 ranked player from January to June this year does not enjoy the benefit of long levers with which to generate power and instead is happy to rely on the pedigree of her technique, her athleticism and sublime timing to maintain the quality of her ball striking.

In full flow, Lydia is a perfect example of a player who trusts in swinging the clubhead, and during the course of this photo shoot at the David Leadbetter Academy headquarters in Orlando she peeled off 6-irons on a perfect trajectory, just a hint of draw, landing the ball with monotony at the 170-yard mark.

“I really don’t think too hard about my golf swing,” says the teenager, this during the week of her 18th birthday.

“David and JJ have created a series of drills that I can use just to keep it all ticking over; it’s uncomplicated, so I focus really on my routine and on visualising the sort of shot I want to hit. Every player is different, and yet the fundamentals we work towards are shared and the more you learn about the way your body works, the more you begin to understand your swing and repeat it. The area of stability and interaction with the ground has probably been the most important area for me and I hope some of the drills you will see over the following pages can similarly help you.”

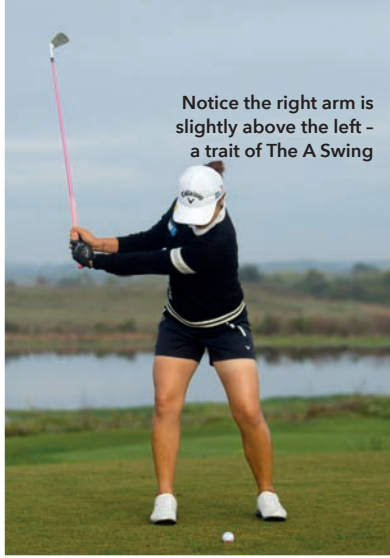
Educated at Pinehurst College, New Zealand, and now studying a psychology course at Korea University, Seoul, Ko’s greatest strength is her presence of mind and the even keel with which she navigates each and every tournament. “I honestly don’t think I’ve ever known a player with her calmness,” says Leadbetter. “She makes the golf swing and the game look easy – and you only do that with a clear and free mind-set.”

So sit back and enjoy the style of one of the game’s most talented golfers – there’s a lot you can learn from watching Lydia Ko.





The hands, arms and body core work together to initiate motion



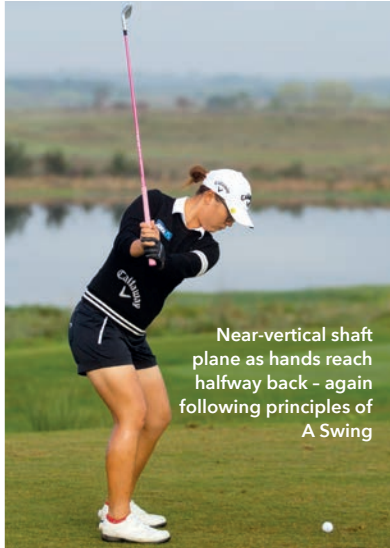
Notice the right arm is slightly above the left - a trait of The A Swing



Short arm swing combines with full shoulder turn for efficient coil



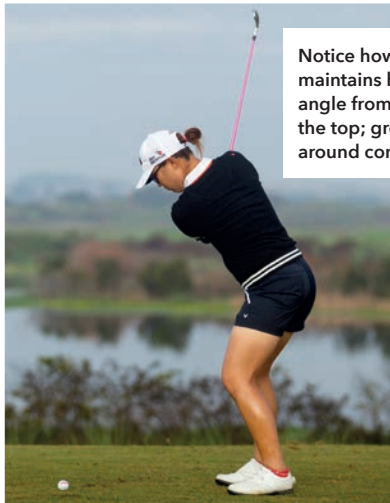
Hands/arms work in, clubhead stays out



Near-vertical shaft plane as hands reach halfway back - again following principles of A Swing



Neat, compact backswing, clubshaft slightly across the line



Notice how well Lydia maintains her spine angle from set-up to the top; great rotation around consistent axis



THE 'A' SWING, LYDIA-STYLE

Synchronisation of hands, arms and body is the key
6-iron from three angles, analysis by swing coach David Leadbetter

We can see straightaway that Lydia has a very solid set-up. Observe the way the hands and arms hang naturally from the shoulders, not overly extended, perfect balance. The chin is nicely held up, too, her eyes almost peering upwards, or outwards at address. They are not looking steeply down, which is a fault many players make. The neck angle is very good, and this is something I'd advise you to copy. Generally speaking, Lydia feels like her chin is up, and this helps here to maintain her height.

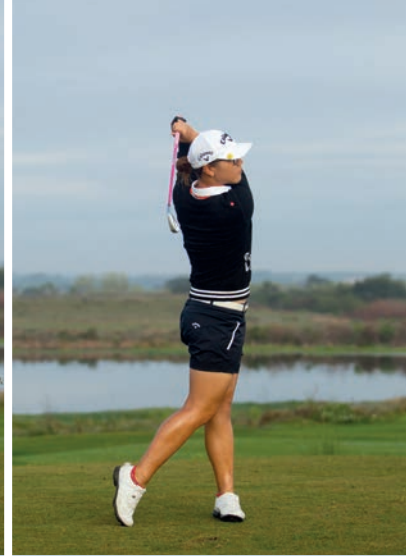
From a comfortable address position, we can see as she works the club back how close her hands are to her body. She actually gets the feeling that she is moving the club away with her core, not purely with the hands and arms. That's another key lesson here. The hands move in, the clubhead stays out. And we

can also see there is not a lot of movement in the lower body through this initial sequence. Although there is a slight shifting with her core, the hips, knee and thighs remain stable.

Reference the zip on her right hip pocket at the top of her backswing; look at the way that, once engaged, the hips turn nicely to allow the arms to swing in and up. She doesn't think consciously about this, she moves her core during the initial stages which in turn moves the hips (while the right knee and thigh remain stable). That's the secret. Too many people focus on moving their hips from the outset, which can lead to excessive hip rotation which drags the arms and club too far inside. The key here is that Lydia establishes momentum with her core, over a stable lower body, and then allows



Arms / club fall into hitting position as lower body initiates move to target



As Lydia rotates and clears for impact, her weight is working toward the heel of the left foot



Perfectly balanced and posed at the finish

the hips to rotate, assisting the movement of the club 'in' and 'up' to the top. There is not a lot of excessive knee or lower body movement - as JJ will discuss.

Traits of the 'A' Swing become apparent as Lydia gets the club into a pretty vertical position around the halfway back point. Working the hands and arms 'in' leads to them working 'up', and as the wrists set she gets the club onto this steep plane - and from here all she does is wind up her torso to complete her backswing.

There is no arm lift to the top, it is simply a completion of her wind up.

Also, note the club is very slightly across the line at the top - another characteristic of the 'A' Swing. This is a wonderfully compact swing. She

looks very wound up, it's a stable look at the top, there's no wasted knee movement and Lydia maintains the flex in her right knee. It's a simple swing to get the club to the top - think 'in and up'.

We work on a steeper pattern going back for the simple reason this encourages a more shallow pattern coming down.

In the change of direction you can see there's a slight lateral movement of the hips to initiate the downswing, and with that the arms are pulled down; as she moves her lower body the arms fall into position - her arms are 'engaged'. The arms work downwards but at the same time the club actually shallows out onto a plane parallel to where it started. We refer to this as the 'V' plane - it's on one angle going back and then

on a shallow angle onto plane coming down. Essentially this has helped her to draw the ball more consistently. Lydia was always a fader of the ball. The aim of the 'A' Swing is to get the club approaching the ball on a shallow, inside path, which creates the draw spin.

As she comes into impact we can see she has cleared her lower body out of the way and her hands are close to her body as she rotates. (In an effort to swing in-to-out a lot of players the hands are moving away from the body, which dissipates speed and power). Her hands follow the rotational path of the body, totally efficient, no wasted motion. And I love the way Lydia really sticks her finish - she gets it there and holds it. That's a sure sign you are in control of your swing.

Cane runs from second toe to middle of the heel - corresponding to the axis of the foot, or Hendrix bar



At impact we are looking for the right foot to work gently toward the target while the left foot remains grounded



IDEAS TO IMPROVE DYNAMIC BALANCE

Engaging with the turf is key to your stability & rotational prowess with biomechanics coach **Jean-Jacques Rivet**

As the action sequences illustrate so beautifully, Lydia has what we would term a compact and extremely well 'grounded' swing. The key, above all else, is that it repeats, and she achieves that through the superb management of weight shift within her feet and lower body - the suspension unit of every good swing that enables a player to rotate around a consistent axis.

Think about it for a moment and common sense suggests that you do not want your feet and legs moving erratically. In order to provide a dynamic base to the rotation of the torso, you want a stable, compliant lower body action. One of the notable aspects of Lydia's swing is the fact she maintains her spine angle so well, which again reflects the quality and consistency of her posture, her swing axis, and the ability she has to repeat a synchronised movement.

When you hear a coach talk about 'building the swing from the ground up' he or she is referring to the unavoidable fact that we play this game via a vital interaction with the grass upon which we

are standing - and that's the area I want to focus on here. In order to wind and unwind your body around a consistent axis (and maintain optimum displacement of your centre of gravity in order to manage the huge centripetal forces applied to the body during the downswing) you need a solid foundation - one that offers a resistance to the club's displacement around the body.

Which is why good footwork is so vital.

What I like about Lydia's swing is that it all looks so right at address: the fact she is smiling so often looking up at the camera reflects how relaxed and comfortable she is - her body is in position, ready to go. Her lower body is 'engaged' to create a very stable posture, feet grounded, while her arms and hands are relaxed.

So how can you work on improving these same qualities in your own swing?

Well, alignment canes provide a useful prop with which to experience the sensation of being grounded through the key stages of the swing. Those of you who are prone to excessive weight

shift and / or swaying will certainly find using the cane a challenge to begin with. Setting up to the ball with the cane running beneath the middle of the feet (from second toe to the middle of the heel) turns the spotlight on the quality of your footwork, weight shift and balance.

Placing the cane under your right foot will enable you to experience the sensation of being 'grounded' on that foot at the set up and during the backswing, not allowing your weight to roll to the outside of the cane but keeping the pressure on the inside of the foot as you absorb the shift of weight into your right side. It will also help to fix any erroneous movement of the right knee during the backswing, and assists the right hip in working gently towards the right heel.

More important still is the stability of that foot as you reverse the gears through the transition, and to stay on that right side for as long as possible before releasing the club through impact. (Resisting the temptation to rush into the downswing is one of the key lessons in golf - 'holding' for a split-second

The more stable your left foot and knee action in the backswing, the better your hip rotation into the right side, mirroring the flow of weight into the right heel



Look at how well Lydia achieves the rehearsed feel (left) at impact for real: left foot is planted, left side absorbs the impact



as you shift into the downswing is vital to synchronising the arms and body.)

Lydia's finish is textbook - hips rotated through to the target, knees gently together, right foot on the toe of the shoe.

Similarly, placing the cane under the left foot again highlights the importance of establishing stability at the set up, maintaining it through the backswing and returning to what we term a 'posted' position at impact. Here, I'm looking for the left knee to point at the left toe

as Lydia winds up her backswing, while the foot itself then remains planted as she unwinds into that 'posted' left side for impact.

Regular readers will have heard me reference the 'Hendrix Bar', which is the anatomical axis running down the length of the foot. Using the alignment canes is simply a way of helping a golfer identify with that axis - and the better you are at keeping your weight centred on that bar, the more stable the foot and knee will be, and the better the quality of your rotation.

Another good drill is to stand with the cane running parallel with your ball-to-target line, directly under the middle of your feet. This is particularly good for those of you who tend to have weight too far forward on the front of the feet.

As you take your set up position, rock forwards and backwards a couple of times before settling your weight directly in the middle of your feet. When your weight is centred the calf and thigh muscles can be engaged correctly.

As you wind up your backswing, your weight flows to the heel of the right foot, toe of the left - feel it on the cane



Plant your left foot for impact - 'post' your left side so that you have a resistance to hit against and rotate through



TOES-UP DRILL

FEEL A BETTER FOOT & LEG ACTION

Hitting balls barefoot is one of the truly great exercises for all golfers to feel and experience an awareness of good footwork, engaging with the turf and improving your chain of motion from the ground up. This is something I ask students to do regularly, as it gives me a good chance to observe exactly how the feet and legs are working in the swing.

And here's another drill to go out and try: at set up with a mid iron, curl the

As Lydia winds her body the muscular kinematic chain can be seen to be working perfectly - i.e. going from the left foot toward the right leg, absorbed by the right thigh as she rotates her right hip

toes of your right foot up as far as you can. From a pure biomechanics perspective, doing this in good posture activates the *tibialis anterior* - the muscle that essentially runs up the leg at the front of the shin, which in turn enables you to activate all of the key muscles that govern good posture in the leg and thigh. The key to this drill - as Lydia demonstrates so well - is to maintain that position all the way to the top of the backswing and through the transition, whereupon the replanting of the right foot signals the delivery of the club

through impact.

You can see by the movement of the right zip on her shorts that Lydia makes a good hip movement to allow room for the torso to rotate and the left arm swings across the chest, in sync with the rotation of her shoulders. All the while, the left foot is grabbing the turf, using that platform to maintain athletic balance.

I cannot stress enough how much good this exercise will do your golf swing - it's one Lydia uses regularly. It will improve your awareness of feeling

and interacting with the turf and so develop the strong platform upon which to make a dynamic, flowing golf swing. It is the quality of this footwork that enables Lydia to maintain her posture angles so well, the hands working in sync with the body.

One final point: you can see the volume of the calf engaging at mid downswing - the kinematic chain is working perfectly. Through impact, Lydia's weight is travelling towards the front of the right foot and the heel of the left, and she exits the through-swing in total balance.



To optimise the release of the right arm you need to have a good grounding of the left foot - a strong post around which to swing through impact. Keeping the left foot flat on the ground is the key

GOLF-SPECIFIC TRAINING

Improve agility, athleticism & core strength



If you were to list the key qualities of a sound swing you would find good core rotational ability and sound athletic balance up there near the top – which pretty much outlines the script of the regular training exercises Lydia relies on to keep her game in shape. With the help of Trevor Anderson, performance director at the DLGA, Lydia has a number of golf-specific drills that would benefit players of all ability.

A strong elastic resistance band offers up a number of potential exercises, this one being a particular favourite: with the band hooped around Lydia's hips, Trevor is able to help Lydia feel and develop the rotational action of the hips and the core muscles over the suspension unit of the lower body – again, focused on the grounding of the feet and engaging with the turf.

You need good athletic balance in order to wind and unwind your swing in posture, and a foam noodle provides an effective way of testing and improving this element of a player's technique. The key is that you establish balance with the noodle positioned under the centre of your feet so that you are able to correctly engage the muscles in your ankles, thighs and hips to resist the tension on the training band. The challenge here is to remain balanced without heels or toes touching the ground...

A medicine ball makes for a great work-out tool as it enables a golfer to develop the quality of his or her body motion while at the same time synchronising the arm-swing. Because the medicine ball is heavy it automatically encourages you to engage the bigger core muscles when it comes to swinging it around your body and create the momentum necessary to propel it forward. (Try to do this with just your hands and arms and you will understand the difference!).

The natural instinct – as Lydia shows us – is to wind up and then take a step into the downswing, or the release – in order to gain some momentum. Which is exactly what the transition period in the golf swing does.

With a little practice you will also begin to recognise the footwork and weight shift that is required to maximise the speed at which you are able to release the ball. Step into the routine – back and then through, a small step forward with your left foot to initiate the weight shift and hip rotation that is key to making this athletic move.

The beauty of working with David Leadbetter and his team (since 1998) is that we discuss as the direction of the specific golf exercises that will be applied to each individual player. David decides the direction in which he would like to go, swing-wise, I then investigate how the body is able to apply that direction, and when it is validated we design a programme of exercises with performance coach Trevor Anderson. So all points are covered



'The benefit of these exercises is captured in these superb swing positions: look at the way Lydia retains her spine angle here; you could trace her set-up posture over the pre- and post-impact positions. She repeats it so well. The angle of attack coming down, the shaft angle, matches perfectly her post-release position. A result of great body movement that enables her to shallow the downswing – and the training she does with JJ and Trevor Anderson, our performance instructor here at the DLGA in Orlando.' – **David Leadbetter**



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