13. LOWER BODY FUNDAMENTALS

TWELVE LOWER BODY FUNDAMENTAL RULES

1. Point Left Foot, Pivot
2. Right Leg Straight Back
3. Snap-In the Right Foot
4. Rotate Right Hip
5. Vertical Back
Lower Body Fundaments Part 3
Based on Rules 6-12

6. Crunch the Abs
7. Elevate
8. Elevate, Rotate and Crunch
9. Weight Transfer
10. Balance
11. Left Side Shooting
12. Right Side Shooting
13. LOWER BODY

6. CRUNCH THE ABS

The abs throw the ball, after the legs and hips have moved.
13. LOWER BODY

6. CRUNCH THE ABS

A hard ab contraction snaps the torso forward for additional power.
13. LOWER BODY

6. CRUNCH THE ABS

A hard ab contraction snaps the torso forward for additional power.
7. ELEVATE

Legs elevate shooter high out of the water.

Height Advantages:

- High elevation
- High release point
- High corner shooting
13. LOWER BODY FUNDAMENTALS

7. ELEVATE CONTINUED:

Legs elevate shooter high out of the water.

Throwing Advantages:

- Fewer interceptions
- Greater leverage, less water drag
- More power
8. ELEVATE, ROTATE, CRUNCH
8. ELEVATE, ROTATE, CRUNCH
13. LOWER BODY FUNDAMENTALS

8. ELEVATE, ROTATE, CRUNCH

The shooter elevates with a strong leg kick, rotates the hips hard and crunches the abs.
13. LOWER BODY FUNDAMENTALS

8. ELEVATE, ROTATE, CRUNCH

Elevate, Rotate & Crunch and the body’s power transferred into the right arm.
13. LOWER BODY FUNDAMENTALS

9. WEIGHT TRANSFER

Shooter steps-back to cock body with Right foot. Shooter steps into shot with Left foot to shoot.

Weight transfer shifts weight from **right leg** to **left leg**

Bad shooter never transfers weight forward off right foot.
13. LOWER BODY FUNDAMENTALS

9. WEIGHT TRANSFER

WEIGHT TRANSFER BACK ON RIGHT FOOT

WEIGHT TRANSFER ON TO LEFT FOOT
9. WT. TRANSFER

C O C K E D

WEIGHT TRANSFER BACK

WEIGHT ON RIGHT FOOT
WEIGHT TRANSFER FORWARD

LEFT FOOT STEPS INTO THE SHOT
13. LOWER BODY FUNDAMENTALS

9. WEIGHT TRANSFER RIGHT TO LEFT

STEP-BACK TO COCK THE BALL
STEP INTO THE SHOT TO SHOOT
SHOOTING

COCKING

WEIGHT TRANSFER
Shooter transfers weight on to the right foot to cock arm. Shooter shifts weight forward on to the left foot to shoot.
9. WEIGHT TRANSFER

The shooter transfers weight onto the right foot to cock ball.

A 165-lb. athlete transfers 165-lbs. onto the right foot.
13. LOWER BODY FUNDAMENTALS

Cocking

9. WEIGHT TRANSFER

The shooter transfers weight onto the left foot to shoot.

A 165-lb. athlete transfers 165-lbs. onto the left foot to throw the ball.
13. LOWER BODY FUNDAMENTALS

9. WEIGHT TRANSFER

Weak shot is the result of poor weight transfer.
Falling over shooter has all of weight on right foot.
13. LOWER BODY FUNDAMENTALS

9. WEIGHT TRANSFER

Bad shooter has all of the weight on right foot.

A Heavy Right Foot.
And A Heavy Back.

Heavy Right Foot leads to a Heavy Back.
13. LOWER BODY FUNDAMENTALS

9. WEIGHT TRANSFER

Bad shooter has all of the weight on right foot.

Ball goes over the goal.
13. LOWER BODY FUNDAMENTALS

9. WEIGHT TRANSFER DEMONSTRATION

Weight transfer happens on every foot step.

Player stands on deck and shifts the weight from right foot to left foot.
13. LOWER BODY FUNDAMENTALS

9. WEIGHT TRANSFER DEMONSTRATION

Shift Weight On To:

RIGHT FOOT: COCKS THE ARM

LEFT FOOT: SHOT
13. LOWER BODY FUNDAMENTALS

10. BALANCE

The great shooter is balanced.

1. Left foot forward
2. Right leg straight back
3. Back vertical
4. Rotate the hips
13. LOWER BODY FUNDAMENTALS

10. BALANCE

Falling-over shooter can’t aim the ball, be accurate or throw hard.
13. LOWER BODY FUNDAMENTALS

10. BALANCE

Shooter with weak legs and right leg not straight back is unbalanced in water.

Right leg back supports the shooter.
13. LOWER BODY FUNDAMENTALS

10. BALANCE

Right leg back supports the right arm of the shooter.

Right foot is always under the ball.
13. LOWER BODY FUNDAMENTALS

10. BALANCE

The length of the right is the length of the arm cock.
10. BALANCE

Right arm cannot be in long arm cock with a long right leg extension.
13. LOWER BODY FUNDAMENTALS

11. RIGHT & LEFT SIDES THROW THE BALL

RIGHT SIDE SHOOTING
- Right Leg
- Right Hip
- Right Arm

LEFT SIDE SHOOTING
- Left Leg
- Left Hip
- Left Arm
13. LOWER BODY FUNDAMENTALS

SHOT COMPOSED OF LEFT SIDE AND RIGHT SIDE BODY MOTIONS
13. LOWER BODY FUNDAMENTALS

11. LEFT SIDE SHOOTING

LEFT SIDE

Fixed

Points

Pivots
13. LOWER BODY FUNDAMENTALS

11. LEFT SIDE SHOOTING

- FIXED POINTS
- PIVOTS
13. LOWER BODY FUNDAMENTALS

11. LEFT SIDE SHOOTING

FIXED LEFT LEG

Left leg is relatively fixed in the water.
13. LOWER BODY FUNDAMENTALS

11. LEFT SIDE SHOOTING

POINTS

Left foot aims the ball.

Wherever the left foot points the ball follows.
13. LOWER BODY FUNDAMENTALS

11. LEFT SIDE SHOOTING

PIVOTS

The shooter’s body rotates around the left foot.
13. LOWER BODY FUNDAMENTALS

12. RIGHT SIDE SHOT

RIGHT SIDE

1. Mobile
2. Left shoulder/foot point
3. Begins shot
4. Balances out
13. LOWER BODY FUNDAMENTALS

12. RIGHT SIDE SHOOTING

MOBILE RIGHT LEG

Right is mobile and moves to point, start shot, balance out,
13. LOWER BODY FUNDAMENTALS

12. RIGHT SIDE SHOOTING

Left Shoulder and Foot Point

By swinging the right leg straight back, a left shoulder point and left foot point are created.
12. RIGHT SIDE SHOOTING STARTS THE SHOT

When right foot snaps-in the shot begins.
12. RIGHT SIDE SHOOTING STARTS THE SHOT

The shot begins in the toes and finishes in fingertips.
12. RIGHT SIDE SHOOTING BALANCES OUT

Positioning the right leg straight back acts as a tripod to prevent falling over.
13. LOWER BODY DRILLS

LEG DRILLS

5 LEG DIRECTIONS
1. Vertical
2. Horizontal
3. Lateral
4. Backward
5. North/South

3 LEG SPEEDS
1. Slow
2. Medium
3. Quick

3 INTENSITIES
Low, medium, high
13. LOWER BODY DRILLS

DRY LAND TUBING DRILLS

Tubing is attached to the ankles to provide resistance to moving the leg forward, backward or rotating the leg inward or outward.

The tubing used is round tubing. There are different colors for various resistances.
13. LOWER BODY DRILLS

DRY LAND TUBING DRILLS

The player stands facing the fence with the tubing and swings the leg straight back for leg extension for the hamstrings.

Reverse direction with the back to the fence and swing the left leg away from the fence for hip flexion and the quadriceps muscles.
13. LOWER BODY DRILLS

DRY LAND TUBING DRILLS

Player’s left shoulder faces the fence and swings right leg out to the side to strengthen lateral hip muscles, the abductors. Player steps-out laterally to the right with right leg hip abductors lifting the leg to the side.

*Weak muscles = no lateral movement.*
13. LOWER BODY DRILLS

DRY LAND TUBING DRILLS

Reverse direction with the left shoulder facing the fence, tubing around the right ankle and swing leg outward, across the left leg to strengthen the groin adductors.

Groin muscles are on inner side of the thigh.

Weak groin muscles often tear.
13. LOWER BODY DRILLS

CHANGE OF DIRECTION SWIMS

1. Change of Direction swims following hand
2. Swim Lunge Left and Right swim 1 lap
3. Swim Lunge Left, Up and Right swim 1 lap
4. High Vertical Lunges 10-20x
5. Swim half lap turn to right then swim straight. Repeat 4-8 laps.
13. LOWER BODY DRILLS

CHANGE OF DIRECTION SWIMS

6. Swim half lap, blow whistle, eggbeater 5 seconds, sprint half lap.

13. LOWER BODY DRILLS

CHANGE OF DIRECTION SWIMS

8. Back and Forth. Sprint 4 strokes forward-2 stroke backstroke, 6 strokes forward-2 strokes back, 8 strokes forward-2 strokes back.

9. 2-4-6-8. Start on 2, swim to 4-swim back to 2, swim to 6-swim back to 4, swim 8-back 2 strokes and stop.
13. LOWER BODY DRILLS

EGGBEATER WITH MEDICINE BALL DRILLS

1. Eggbeater with medicine ball 10-30 sec.
2. Eggbeater toss w. medicine ball 10-30 sec.
3. Pass with heavy ball to wet partner 15-30x.
   On-deck partner tosses underhand med ball to eggbeatering player close to wall. Deck player tosses the med ball to partner 25 to 100x. Use 2-4 lbs girls; boys 4-8 lbs.
13. LOWER BODY DRILLS

EGGBEATER WITH MEDICINE BALL DRILLS

5. Tubing & Eggs. Use short 4-foot tubing, move to tension, eggbeater for 10-60 sec.

6. Tubing with Med Ball. Same as above with player holding medicine ball over the head for 10-30 seconds.

7. Long tubing. Eggbeater against gradually tensing long tubing for a lap. Do 4x.
13. LOWER BODY DRILLS

EGGBEATER WITH MEDICINE BALL DRILLS


9. Rudic Kill Drill. Long tubing with med ball, egg-beater 1 lap to cage, catch and shoot 7 shots.

10. Long tubing, med eggs and shoot. Eggbeater 1 lap to cage, hold medicine ball over head for 10-15 seconds, catch and shoot 5 times.
13. LOWER BODY DRILLS

EGGBEATER WITH MEDICINE BALL DRILLS


12. Chair drill. Use a plastic chair, hold on to legs, wrists out of water, body vertical. Do not use a metal chair. Low intensity/low strength drill.

Player cheats: lies on back and flutter kicks.
13. LOWER BODY DRILLS

EGGBEATER DRILLS NO WEIGHTS

1. Eggbeater with wrists out of water
2. Eggbeater with elbows out
3. High intensity eggbeater kick armpits out
4. Eggbeater and quarter spin in place
5. Eggbeater half spin in place
6. Eggbeater 360 spin in place
13. LOWER BODY DRILLS

EGGBEATER DRILLS NO WEIGHTS

7. Eggbeater clap hands
8. Eggbeater lunge to right and left
9. Eggbeater against partner
10. Frog leaps. Leap over eggbeating player
11. Sink the eggbeatering player. Partner tries to sink eggbeatering partner by pushing down on shoulders. Have med ball hold on to ball when pushed down.
13. LOWER BODY FUNDAMENTALS

**SUMMARY**

1. *The legs throw the ball.*

2. *The legs are the shot.*

3. *The left foot pivots and points.*

4. *All throwing mistakes are leg mistakes.*
5. The right leg is straight back for balance.

6. The right leg starts the shot.

7. 75% of the power for the shot comes from the legs and hips.

8. Weight transfers from right to left foot.
13. LOWER BODY FUNDAMENTALS

SUMMARY CONTINUED

9. The legs are aim, accuracy, angularity (angled body), verticality and (ball) velocity.

10. Without a left foot point, there is no shot.

11. The left side of the body is fixed and points.

12. The right side is mobile and shoots.
13. LOWER BODY Q & A

1. The left foot aims the ball.
   True
   False

2. The legs and hips are the shot.
   True
   False

3. Aim, accuracy, angularity, velocity and verticality come from the legs.
   True
   False
13. LOWER BODY Q & A

4. The lower body is the legs and hips.
   True
   False

5. The hips throw the ball.
   True
   False
13. LOWER BODY Q & A

4. The lower body is the legs and hips.
   True
   False

5. The hips throw the ball.
   True
   False

   (Hips provide the rotation to throw the ball.)
13. LOWER BODY Q & A

6. Hip rotation is more important than the right arm motion.
   True
   False

7. The right hand aims the ball.
   True
   False
13. LOWER BODY Q & A

6. Hip rotation is more important than the right arm motion.
   True
   False

7. The right hand aims the ball.
   True
   False
   *(The left foot aims the ball.)*
13. LOWER BODY Q & A

   - True
   - False

9. The left shoulder by itself aims the ball.
   - True
   - False

10. Shoulder rotation is important.
    - True
    - False
13. LOWER BODY Q & A

   True
   False
9. The left shoulder by itself aims the ball.
   True
   False
   *(The left foot and left hand aim the ball.)*
10. Shoulder rotation is important.
    True
    False
    *(The hips and torso rotate the body.)*
13. LOWER BODY Q & A

11. Elevation is not important.
   True
   False

12. The legs do not make a vertical back.
   True
   False
13. LOWER BODY Q & A

11. Elevation is not important.
   True
   False
   *(Elevation creates great power, high corner shots.)*

12. The legs do not make a vertical back.
   True
   False
   *(Strong legs make the back vertical.)*
13. LOWER BODY Q & A

13. Left foot is a pivot point. Body rotates around the left foot for cocking and shooting.
   True
   False

14. Right leg creates the left shoulder point.
   True
   False

15. The right foot starts the shot.
   True
   False
13. LOWER BODY Q & A

16. Left leg points, the right leg shoots.
   - True
   - False

17. A square player can have a 2-foot long arm cock/arm extension.
   - True
   - False
13. LOWER BODY Q & A

16. Left leg points, the right leg shoots.
   True
   False

17. A square player can have a 2-foot long arm cock/arm extension.
   True
   False
   (Angled body creates hip rotation, long arm cock.)
13. LOWER BODY Q & A

18. L.R.R. Left (point), Right (leg back) and Rotate (hips) are the rules for the throwing motion.
   True
   False

19. A square player cannot cock the right arm, hips or legs.
   True
   False
18. **L.R.R. Left** (point), **Right** (leg back) and **Rotate** (hips) are the rules for the throwing motion.
   True
   False

19. A square player cannot cock the right arm, hips or legs.
   True
   False
   *(Cocking the ball requires an angled body.)*
13. LOWER BODY Q & A

20. Ball height and high corner shooting is created by the leg kick.
   True
   False

21. Shooter lying on back accurately throws the ball at the high corner of the goal.
   True
   False
13. LOWER BODY Q & A

20. Ball height and high corner shooting is created by the leg kick.
   True
   False

21. Shooter lying on back accurately throws the ball at the high corner of the goal.
   True
   False

*(Shooter is vertical with hand 30-inches high.)*
13. LOWER BODY Q & A

22. Lying-on-the-back shooter rotates the hips and torso easily.
   True
   False

23. Left-sided shooting: fixed, angled and aims the ball.
   True
   False
13. LOWER BODY Q & A

22. Lying-on-the-back shooter rotates the hips and torso easily.
   True
   False
   (Only a vertical shooter rotates hips and torso.)

23. Left-sided shooting: fixed, angled and aims the ball.
   True
   False
13. LOWER BODY Q & A

   True
   False

25. Shooter’s lower body more important than upper.
   True
   False
13. LOWER BODY Q & A

   True
   False

25. Shooter’s lower body more important than upper.
   True
   False

   (Legs and hips generate most of the power for shot.)
13. LOWER BODY Q & A

26. The shooter’s weight remains on the right foot when throwing the ball.

True
False

(When all of the weight is on the right foot the shooter falls over on back. No weight is transferred forward. Weak shot, shot is high).
27. Shooter’s weight is on right foot to cock the ball and shifts forward to left foot to shoot.

True
False

(All of shooter’s weight shifts forward onto left foot to create maximum power and accuracy).
13. LOWER BODY Q & A

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