CHAPTER 12
FUNDAMENTAL CONCEPTS
50 Slides

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12. FUNDAMENTAL CONCEPTS

INTRODUCTION

Fundamental concepts are the rules and theories that govern the throwing motion.

There are rules for the lower body and upper body. The shooter uses the correct technique to shoot the ball.
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THE THOUGHT IS THE THROW

It is no longer possible in the game of water polo to “just throw the ball” without thinking.

The shot is a planned and calculated motion.
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TEN FUNDAMENTAL RULES

1. The Whole Body Throws the Ball
2. Shot Starts in the Toes, Ends in Fingertips
3. Catching, Cocking and Shooting
4. Right Hip is Supreme
5. Left Hand is Also Supreme
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TEN RULES CONTINUED

6. Cocking and Acceleration

7. The Whip

8. Verticality and Elevation

9. Spin is Supreme Too

10. Countermotion
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WHOLE BODY THROW THROWS BALL

Four Parts of the Throwing

1. Legs
2. Hips
3. Torso
4. Arms Left & Right
WHOLE BODY THROWS BALL

Its the body, not the right arm
1. Aims
2. Starts the shot
3. Elevates
4. Produces 75% of the power.

Right arm is last part to move.
1. THE WHOLE BODY THROWS THE BALL

**ARM** releases the ball

**TORSO** moves forward & rotates

**HIPS** rotate

**LEGS** start the shot
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2. SHOT STARTS IN TOES, ENDS IN THE FINGERTIPS

The throwing motion does not begin in the right arm. It starts in the toes with the right foot snapping in.
3. CATCHING, COCKING AND SHOOTING

Accelerating the body and right arm forward is simple if body correctly cocked.
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3. CATCHING, COCKING AND SHOOTING

The right arm is dumb.

Right arm does what the body tells it to do.
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3. CATCHING, COCKING AND SHOOTING

1. Catch sets up the shot.
2. Catch leads to cocking the ball.
3. Cocking the ball leads to shooting.
4. Right arm follows the body.

Good Catch = Good Shot
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3. CATCHING, COCKING AND SHOOTING

Good Catch = Good Shot

When the ball is cocked correctly the right arm (and body) is set up properly for a great shot.

Right Arm Does Not Set Up The Shot.
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3. CATCHING, COCKING AND SHOOTING

A square-to-the-goal player cannot cock the ball at all.

Without an arm extension the shot is weak.
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3. CATCHING, COCKING AND ACCELERATION

Players mistakenly concentrate on last part of shot, the right arm and release.

Right arm last part to move.
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3. CATCHING, COCKING AND ACCELERATION

Bad catch CAUSES bad shot.

Bad release is an EFFECT.
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3. CATCHING, COCKING & ACCELERATION

Coach, “I don’t see any mistakes.”
We Have A Problem!

The shooter’s legs and hips are underwater. We cannot see 85% of the shooter’s mistakes.

What do we do? Get goggles and look.
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3. CATCHING, COCKING & ACCELERATION

The bad catch and bad cocking is the result of poor leg positioning.

Bad catch **not** the result of right arm positioning.
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3. CATCHING, COCKING & ACCELERATION

Fix:
What we see (arm) is not the cause of bad shot.

Fix the legs and hips and the release is fixed.
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4. RIGHT HIP IS SUPREME

Hip Rotation Is The Shot

Rotation: most important part of the throwing.
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4. RIGHT HIP IS SUPREME

Hip Rotation Is The Shot

Power for throwing, comes from hip rotation.
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4. RIGHT HIP SUPREME

Hip Rotation Is The Shot

Stronger the hips, stronger the shot.

Faster the hips rotate.
Faster the shot.
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4. RIGHT HIP MISTAKES

Half of ball speed is lost without hip rotation.
Each gender has their own hip problems.

Girls are Square to Goal
Boys are Flat on the Back
4. RIGHT HIP MISTAKES

A Girl Problem

Right hip cannot move if her feet are together (square-to-the-goal).
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4. RIGHT HIP MISTAKES

A Boy Problem

Right hip cannot move when the shooter is lying on his back.
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5. THE LEFT HAND IS ALSO SUPREME

Catch: Sweep Left
Fake: Sweep Right
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5. LEFT HAND IS ALSO SUPREME

Shooter’s right hip is supreme

if it is assisted by the LEFT HAND.

Left hand helps to rotate the hips.
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5. LEFT HAND IS ALSO SUPREME

The hips rotate but water drag stops the right leg motion after moving 50-percent.

*Left hand* pulls or sweeps water to the side turning the body the *other 50-percent*. 
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5. LEFT HAND IS ALSO SUPREME

Shooter told to “step-back and rotate the hips.”
Right leg stops dead in the water.
Water drag stops leg after 50% movement.
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5. LEFT HAND IS ALSO SUPREME

Without the left hand and full hip rotation:

1. No catch
2. No left foot point
3. Right leg is not straight back
4. No angling of the body
5. No pump fake
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5. LEFT HAND SUPREME

Without left hand/hip rotation:

- No left shoulder point
- No arm cock
- No shot
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5. LEFT HAND IS ALSO SUPREME

Left hand makes the right leg straight back.

Left hand pulls hip next 50% swinging the right leg straight back for a long arm cock.
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5. LEFT HAND IS ALSO SUPREME

Left Hand Rotates The Hips

To catch the ball the left hand pulls and rotates the hips to swing the right arm back. Without hip rotation the ball is dropped.
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5. LEFT HAND IS ALSO SUPREME

Left hand turns player’s body so the ball is swung backward into an arm cock.

Preparatory stage, partially angled body to prepare for the catch, uses left hand sweep.
5. LEFT HAND SUPREME

Catching the ball

Left hand sweeps left to push water, turning the body and swinging back the right arm.
5. LEFT HAND SUPREME

Catching the ball

Right arm moves 1 inch.
R. arm attached to body.

When body rotates, the right arm swings back.
5. LEFT HAND SUPREME
CATCHING THE BALL

Full hip rotation and right leg motion depends on left hand sweep turning the body.
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5. LEFT HAND IS ALSO SUPREME

Catch and Shoot

Shooting begins with the left hand pulling down and the right foot snapping inward.
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5. LEFT HAND IS ALSO SUPREME

Backswing    Fore Swing    Elevate

Left hand pull rotates hips to left and to right. Pulls torso forward. Pushes down to elevate.

Never have a motionless left hand.
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5. LEFT HAND SUPREME

Pump faking: left hand sweeps to left and right.

Backswing: Sweep Left

Fore swing: Sweep Right
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5. LEFT HAND SUPREME

Pump faking:

Backswing:
Sweep Left

Fore swing:
Sweep Right
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5. LEFT HAND IS ALSO SUPREME

Demonstration

Player in water, fully rotates the hips to right, and step-backs into leg extension with the right leg without using the left hand.

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5. LEFT HAND IS ALSO SUPREME

Demonstration

Water drag stops the right leg motion halfway.

Use left hand to sweep left so the right leg can swing all the way back.
12. FUND. CONCEPTS Q & A

1. The whole body throws the ball.
   True
   False

2. Rotation is the No.1 motion in throwing.
   True
   False

3. Left hand points, cocks, begins shot elevates.
   True
   False
12. FUND. CONCEPTS Q & A

4. Catching and cocking set up the shot.
   True
   False

5. Left Foot Aims the Ball.
   True
   False

6. The right hand aims the ball.
   True
   False
12. FUND. CONCEPTS Q & A

7. The catch has no effect on the shot.
   True
   False

8. A shooter falling over has no effect on the shot
   True
   False

9. A square body position to the goal is for women.
   True
   False
12. FUND. CONCEPTS Q & A

Answers to the Science of Shooting PowerPoint Chapter 12 Part I.

1T 2T 3T 4T 5T 6F 7F 8F 9F
END
First Half of
Chapter 12
Part 1