

# *Examining The High Jump*

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*“Remember, we often time spend all our time focusing on technique. It’s not always what you do on the track that counts. It’s often times what you do off the track the counts. So let’s start there!” Bryan Hoddle*

### GOAL SETTING

*Before setting foot on the track it’s essential to goal set:*

*Goal Setting-It is critical to set goals with the athlete. Here are the two types of goals and how to use them.*

*OUTCOME GOALS*-*These are final result goals.*

*Example- I will jump 7'0" and win the state championship.*

*PERFORMANCE GOALS*-*These are the most important of the two goal areas. These goals are items you control on a daily basis. Performance goals are the things you do on a daily basis to help you achieve the outcome goal.*

*Example-I will stay hydrated at all times. I will consistently sleep 8-9 hours a night. I will post-stretch after each workout.*

### NUTRITIONAL AND HEALTH CONSIDERATIONS

*(If you want to be a champion, eat like one)*

#### Basic Elements of Nutrition

*\*Carbohydrates: (Energy source for muscles during workouts)*

*\*Fats: (Energy, assimilation of protein, synthesis of hormones)*

*\*Proteins: (Take within 45 minutes of the conclusion of the workout for better utilization and to activate the natural bodies human growth hormone)*

*\*Vitamins: (A, B, C, D, E, K)*

*\*Minerals: (Essential to help absorb vitamins-also, muscle cramps can mean you have an insufficient amount of trace minerals in the body)*

*\*Water: (Drink ½ your body weight in ounces minimally each day)*

#### Carbohydrates

*Best Source:*

*Complex carbohydrates from vegetable, fruits, and whole grains. The more colorful the better. Whole grain should be the #1 ingredient in cereal and breads.*

*Minimize Source:*

*Simple sugars - soda, candy, desserts*

*Refined grains - “enriched flour”*

*Carbohydrates: Meal Timing*

*Pre-competition/practice:*

- \*2-4 hours before*
- \*Low in fat*
- \*Low-Moderate protein*

*Snacks during competition/practice:*

- \*Emergin-C (excellent source of trace minerals-won't spike blood sugars)*
- \*Small source of protein*
- \*Fruits and vegetables. 45 minutes between proteins and fruits and vegetables.*

## PROTEINS

Primary Source: *Used to build bodily structures and enzymes*

Secondary Source: *Energy*

*\*Elite athletes need 2X amount of average person.*

### BEST SOURCE:

*Fish, lean meats, lean milk, yogurt, eggs, cottage cheese, and part-time skim cheese. ( contain all essential amino acids)*

### OTHER SOURCE:

*Beans, nuts, seeds, and grains*

## VITAMINS

- \*Promotes general health*
- \*Aid energy production*
- \*Necessary for proper body function*
- \*Injury prevention*

## MINERALS

*\*Calcium, Zinc, Iron, Sodium, Potassium, Phosphorous, Magnesium*

### Random thoughts:

- 1. Always start the day off with juice to detoxify the body. Lemon and water are excellent, but orange, apple, and grapefruit will do. The reason this works is because it stimulates the bile in the body.*
- 2. Soda Pop has 16 teaspoons of sugar in it. (Standard can of pop) This hampers digestion, clogs the liver, depletes you of energy, and dehydrates the body because it is processing the chemicals. It hampers digestion for up to 3 minutes, which means the food in the body ferments and produces gas and indigestion. When this happens, energy levels go down by about 20%.*
- 3. If you find yourself waking up between 2:00-4:00am, usually your adrenal glands are exhausted. You may need rest, or supplements that will support your adrenal, such as B-5.*
- 4. Your body re-energizes and repairs between 10:00 and 2:00am.*
- 5. Plantar warts can be caused by lack of Vitamin A and E and poor mineral absorption. A good digestive enzyme will help.*
- 6. Mild dehydration will slow down one's metabolism as much as 3%.*
- 7. Lack of water is the number one reason for day time fatigue.*

8. *If you are thirsty, research shows that you are lacking 3% of your body's water supply. 75% of Americans are chronically dehydrated.*

9. *If you have continuously have dry lips, you are lacking 7% of your body's water supply.*

10. *Drink water at room temperature. Drinking ice water will stop digestion. 4 ounces every 30-40 minutes.*

### **TESTING**

**30 Meter Sprint-** *A test of accelerative power. The athlete runs 30 meters for time from a stationary start.*

**Standing Long Jump-** *A test of starting power and elastic strength. The athlete performs a single jump for distance from a standing start.*

**Overhead backward throw-** *A test of power and acceleration. The athlete stands on the shot toeboard facing away from the sector with the shot in both hands. The athletes then squats, lowers the shot below the waist, then throws the shot for distance overhead.*

**Underhand Forward Shot Throw-** *A test of power and coordination. The athlete stands on the shot toeboard facing the sector with the shot in both hands. The athlete then squats, lowers the shot below the waist, then throws the shot forward for distance.*

**Standing Triple Jump-** *A test of elastic strength, power and coordination. The athlete, from a double legged standing start, performs three jumps. The test begins with a double leg takeoff, then a right-left or left-right contact pattern prior to landing.*

**General Strength Tests-** *These are tests of general strength, coordination, and body control. The athlete is asked to perform as many repetitions of a given general strength exercise as possible in a certain period of time. A 30 second situp test is an example.*

**30 Meter Fly-** *A test of absolute speed. The athlete runs 30 meters for time, after having previously accelerated through a 20 meter acceleration zone.*

**150 Meter Sprint-** *A test of speed endurance and specific coordination. The athlete runs 150 meters for time from a stationary start.*

**Weight Exercise Maximums-** *Test of absolute strength and power. Various protocols can be used, with safety in testing a priority.*

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## The APPROACH

- \*The Jump is generally 8-12 strides long.*
- \*Consistent approach is critical. Controlled speed. Strength, Timing and technique are components of jump.*
- \*Use of checks marks*
  - 1. Athlete can have a check mark and the coach can have one.*
- \*Proper acceleration mechanics, body posture critical.*
- \*Frequency should be increased throughout the approach.*
- \*Don't sell out mechanics for uncontrolled speed.*

## THE PHASES OF THE APPROACH

- \*\*\*\*\*DRIVE PHASE-First 2-3 strides in the high jump*
- \*\*\*\*\*ACCELERATION PHASE-Continued acceleration with upright posture and efficient sprint mechanics.*
- \*\*\*\*\*TRANSITION PHASE-Final 4 strides. Final adjustments are made to initiate take-off. Jumper should gradually turn shoulders away from the bar.*

## SIMPLY POINTS OF EMPHASIS IN THE HIGH JUMP

- 1. As the fourth stride makes contact, the center of gravity is displaced by leaning to the left at the ankle joint which initiates the curved portion of the approach. Maintain a long body axis from head to toe while displacing the center of gravity at the ankle joint.*
- 2. Let the bar come to you. Don't jump over the bar, jump in front of it. Your momentum will carry you into the pits.*
- 3. Key off the top of the far standard on the last three strides. Inside shoulder high, post the front shoulder.*
- 3. The take-off foot is usually planted between 2 1/2 to 3 1/2 feet out from the near standard and is in line with the direction of the run. The distance will vary with the velocity of the approach and technical proficiency of the jumper.*
- 4. In lay out, pinch your butt cheeks together to elevate hips. Do not immediately jump into a layout position, instead extend the body and climb vertically through the cylinder before attempting bar clearance.*
- 5. After the arms are blocked at take-off, they can be placed at the sides of the body.*
- 6. After bar clearance, tuck the chin into the ADAMS APPLE to raise feet.*
- 7. Landing should take place on the shoulders. Sometimes the jumper will perform a back somersault.*

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## Drills

*RUSSIAN JUMPING-Bar starts 6-8 inches below PR. If jump is made, bar goes up 1 inch. If bar is missed, bar down 2 inches.*

*15 JUMPS-Athlete gets 3 attempts at 5 given heights. Percentage of jumps made is the goal.*

*20 JUMPS-Athlete gets 20 total jumps in the practice session.*

*SCISSOR JUMPS-Athlete scissors the bar. Excellent for getting athlete up through the cylinder.*

*RAMP or BOUNCE BOARD WORK-Athlete vaults off the front end of a incline ramp or bounce board. Excellent drill to teach athlete to be patient.*

**ENDURANCE JUMPING-Athlete gets 12 jumps at 4 inches below PR.**

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**Common Problems in the High Jump-Courtesy of Jim Santos of NavyRun Jump n'Throw**

***\*Approach steps too short, preventing the jumper from attaining good speed into the takeoff: Solution: Be sure to have 5 steps on the curve. You can go from 4 steps on the approach into the curve for a total number of 9-11 strides in the approach.***

***\*Inconsistent steps into the plant: Solution: Practice the first 4-6 steps going into the arc. These steps must remain constant. Use two marks, a starting point, and a mark to start the arc.***

***\*Not enough speed into the plant: Solution: Practice a fast last 3 steps into the plant. Do not slow down in the last three steps....accelerate.***

***\*Running parallel to the bar during the last 2 strides of the approach: Solution: Check the arc of the approach. Be sure that there are only 5 strides in the curve, not 6.***

***\*Plant is inconsistent:The heel of the plant foot must always be in line with the inside high jump standard. US the standard as a checkpoint for all plants for every jumper.***

***\*The knee of the jumper crosses over on the takeoff and exposes the back too early to the bar: Solution: The plant foot must be pointed toward the inside far standard on the plant. If the jumper plants the foot parallel to the bar, the takeoff knee will come across the body too much to allow for a good takeoff.***

***\*Jumping into the bar too early: Solution: Arms must drive upward before reaching over the bar. Check the inside shoulder on the plant. This shoulder should be higher than the outside shoulder.***

**GENERAL WORKOUT SCHEDULE**

(high levels of lactate will rip up you elasticity which is much needed in jumping)

**\*AB and LOWER BACK WORK EVERY DAY**

**\*500 sit-ups a day, 150 javelin curls a day**

**TRAINING PLAN**

Monday

Weights

Multi-throws

High Jumping-Velocity work

Single leg bounds

Tuesday

Swim day

Wednesday

Running day/Cross Training

Thursday

Weights

Multi-Throws

High Jumping-Velocity work

Single leg bounds

Friday

Swim day/Cross Training/Running Day

Saturday

Day off or meet

Sunday

Day off-Church-Family Day

Velocity Days( 4 minutes between reps)

6 x 30 meter fly

400 the hard way

Running Days

6 x 60 meter runs at 80%

Swim Day

25 meter pool-Swim down with a total of 60 seconds, swim and rest.

Single Leg Bounds

Maximum of 140 foot contacts