

Bobsleigh CANADA Skeleton National Skeleton Program Athletic Testing Protocols

PURPOSE

Physical stature, speed and strength are the primary athletic attributes of a skeleton athlete. Bobsleigh Canada Skeleton's (BCS) National Skeleton Program (NSP) Athletic Testing Protocols are designed to quantitatively identify, evaluate and track the athletic foundations of all current and prospective national team skeleton athletes. Athletic testing data is utilized to assist in identifying athletic performance gaps as part of Individual Athlete Performance Plan (IPP) development.

1. ANTHROPOMETRIC

Height & Mass

The height and body mass of the Athlete shall be recorded at the start of athletic testing as follows:

- a. Height shall be measured in centimetres (cm).
- b. Body mass shall be measured in kilograms (kg).

2. SPEED

60m Sprint

The 60m Sprint, recording time intervals at 15m, 30m, 45m and 60m, is used to evaluate both speed development and maximal velocity. Notably, the 30m interval time is used for the 'NSP Sprint Standard' metric. The '30m Fly' metric is calculated by subtracting the 30m interval time from the 60m finish time. The 60m Sprint testing protocol is as follows:

- a. The Athlete is given a maximum of 3 attempts.
- b. The 0m, starting, lights are set on tripods being at the lowest height setting placed a minimum of one lane width apart. The 15m, 30m, 45m and 60m, interval, lights are set on tripods being at the highest height setting placed a minimum of one lane width apart or the same as the 0m, starting, lights.
- c. A start box is measured and clearly indicated 1m behind the designated 0m mark. The Athlete starts from a 2-point stance, keeping the entire lead foot inside the 1m box, with the heel of the lead foot being fully clear of the start box tape.
- d. The Athlete must start from a static position and any movement initiation may only be forward.
- e. The lead foot must remain in contact with the ground until the athlete has initiated a forward move.
- f. The set-up orientation of the Athlete must be as if a vertical line is drawn up from the toe of their lead foot, while their shoulders remain in line, or in front of said plane. Shifting of the Athlete's bodyweight backwards prior to starting or beginning with their shoulders set behind the toes of their lead foot is prohibited. This is known as a "rock back" and will invalidate the test.

3. ABSOLUTE STRENGTH

Power Clean: 1 Rep Max

The Athlete is given a maximum of 3 attempts for a 1 Rep Max (1RM). The Athlete must inform the tester prior to each 1RM attempt so that the results can be recorded as official. The Power Clean testing protocol is as follows:

- a. The Athlete pulls a barbell from the floor to be caught in a 'Front Rack', at a position of shoulder height.
- b. The barbell must be caught in a 'Half-Squat', at or above a position with the top of the Athlete's thigh parallel to the ground. The Athlete stands up to full posture while maintaining control for a minimum of a two count.
- c. Weightlifting straps, belts, shoes and knee wraps may be used.

4. ELASTIC STRENGTH

For all elastic strength tests the Athlete will be given a maximum of 3 attempts. The order of the tests may vary according to the testing camp schedule and/or facility. The Elastic Strength testing protocols are as follows:

Underhand Forward Heave

- a. Men's Athletes use a 5kg med-ball; Women's Athletes use a 4kg med-ball.
- b. The Athlete sets up in a double-leg stance with their toes behind a designated start line.
- c. The Athlete dips to a non-predetermined depth, while holding the med-ball in both hands in-front of the body, and immediately throws the ball forwards as far as possible.
- d. No stepping or extra foot movement will be allowed prior to throwing the med-ball.
- e. The Athlete may jump-out or run-out over the line after the throw.
- f. The throw distance is measured from the rear aspect of the start line to the nearest point of contact, relative to the rear aspect of the start line, at which the tester determines the med-ball first touches the floor.

Standing Long Jump

- a. The Athlete must set-up in a double-leg stance with their toes behind a designated start line.
- b. The Athlete dips to a non-predetermined depth and immediately jumps forwards as far as possible.
- c. Feet must remain stationary prior to jumping.
- d. The Athlete must hold the landing position until the tester can accurately determine the point of contact nearest to the start line.
- e. The jump distance is measured from the rear aspect of the start line to the nearest point of contact, relative to the rear aspect of the start line.
- f. The Athlete stepping back after landing, falling back or touching the floor with their hand behind their heel, is a missed attempt with no being result recorded.