



Gymnastics BC Physical Testing Program (v. Jan/31/21)

Adapted from: GymCan Aspire Camp Testing (2017, 2019 versions), GBC Physical Testing 2019-20
Contributions from: Dana Lainchbury, CAT(C); BC WAG Retreat Participants, August 2019

The intention of the BC Physical Testing Program is to provide the province with a program that is easy to use within clubs, which coaches can use to compare athletes and identify physical ability gaps, and that can assist with preparing athletes and coaches for Physical Testing at the National Level. It also emphasizes specific elements which are fundamental to development gymnastics at the higher JO and HP levels, and introduces concepts of a) alignment and correct movement patterns, b) control in the end range of motion, and c) power and d) anaerobic lactic capacity. The test is not cumulative, which means coaches can select which of tests are the most useful. Coaches who are looking for a cumulative test can read more about the GFMT below.

In 2019-20, a trial run was conducted across clubs and training camps with this testing program. While it was easy to use, the number of tests was time consuming, and that many athletes who could not complete more difficult movements such as a kip-cast to handstand or press would receive a series of zeros, which may not identify smaller gains in physical ability up to that point. As a result, a series of modifications was developed by Dana Lainchbury, CAT(C), who modified the current exercises to make it applicable for athletes in the Xcel and Compulsory levels.

Concurrently in 2019-20, a Physiological Assessment was developed by Heather Ramsbottom, which consists of two parts: a Range of Motion Assessment, and a Performance Based Gymnastics Functional Movement Tool (GFMT). The benefit of using Physiological Assessment is that there are specific conditioning programs that can be applied in the event of lower scores in a specific area. This was designed for athletes in the higher range of levels, 8, 9, 10 and high performance, and is currently in place as the required CSI reporting methodology. It assumes that the athletes are already competent in the required elements for that level, including kip cast to handstand and press to handstand. They are not considered defining physiological characteristic for the level, rather they are technical aspects, and are therefore not included in the physiological testing. To access the Physiological Assessment, visit the [WAG Program Website](#) for the [Strength and Conditioning Manual](#), the Periodization Chart, and the Assessment Protocol Evaluation Sheet.

Coaches in the Xcel, Compulsory, and early Optional levels are recommended to utilize this series of tests, or other developmental testing, because they emphasize standard introductory movements and elements. Coaches with more experience in testing, and athletes who need a more specific methodology of screening and ranking are advised to use the ROM and GMFT found within the Physiological Assessment in the [Strength and Conditioning Manual](#). Use of the Physiological Assessment is required for CSI Target Athletes.

Each test is described by equipment needed, format, start position, movement, and scoring. Coaches can track the results by using on the chart provided on the last page.

ROPE CLIMB – 3 METERS

EQUIPMENT	One rope at least 4 meters in length
FORMAT	One warm-up attempt is allowed (optional) One attempt per gymnast
START POSITION	The gymnast sits in a straddle position on the mat with one hand on the 1 meter mark and the other hand free; The gymnast is immobile for at least 3 seconds before she may start the climb.
MOVEMENT	The gymnast climbs the rope in a straddle pike position as fast as possible to touch the 4 meters mark or higher (total length climbed = 3 meters). Contact with the floor following the start is not allowed. The legs must be straight and held above horizontal throughout the climb. Kicking, swinging or scissoring of the legs is not allowed. <i>Modification: climb completed with legs in any position, although this should only be used for athletes in the earliest levels of development.</i>
SCORING	The stopwatch is started with the first movement of any part of the body of the gymnast and stopped upon contact of the fingers with the 4 meter mark. Time is recorded in the format ss:ms - ie: 08:32 is 8 seconds and 32 milliseconds.

SERIES OF KIP CAST TO HANDSTAND

EQUIPMENT	Low Bar of Uneven Bars;
FORMAT	One warm-up attempt is allowed (optional); One gymnast at a time is assessed; One attempt per gymnast.
START POSITION	Standing in front of the low bar.
MOVEMENT	The gymnast performs as many kip cast to handstand (legs together) as possible with straight arms and legs together, finishing in a handstand (with a momentary balance in handstand). The usual requirements for good technique/execution apply. The elements must be in a row, directly connected without a stop, pause or adjustment. <i>Modification 1: Coaches could choose to evaluate based on kip-cast to horizontal for Compulsory athletes.</i> <i>Modification 2: Coaches could choose to evaluate single casts in a row for athletes still learning kip. The coach would need to select horizontal, 45 degrees, or handstand at the target amplitude.</i> <i>Modification 3: Coaches could choose to evaluate the series with straddle</i>

	<i>technique to handstand, although straight body is highly recommended. Straddle should not be used at all for any target height less than handstand.</i>
SCORING	The assessor counts loudly the number of acceptable casts and repeats the preceding number in case of an unaccepted cast. Ex, 1, 2, 3, 4, 5, 5, (not acceptable) 6, 7, 7 (not acceptable).

HANDSTAND BALANCE

EQUIPMENT	Hard floor surface or equivalent of floor tumbling strip placed directly on the floor or hard surface covered with carpet.
FORMAT	No warm-up in front of the assessor, but warm-up must be available on same floor surface as assessment surface; One attempt per gymnast; Gymnasts may wear wrist protection. <i>Modification: Coaches may select two attempts for athletes in Compulsory or Xcel categories. The long-term objective should be to have athletes acquire a stable handstand on the first attempt.</i>
MOVEMENT	The start position is optional; The gymnast performs a handstand on both arms with the legs together for as long as possible.
SCORING	The assessor says "GOOD" as soon as the gymnast reaches the handstand position with legs together and starts the stopwatch; The assessor counts loudly every 10 seconds: ex. 10 seconds, 20 seconds, 30 seconds, etc.; The timing will cease when; <ul style="list-style-type: none"> -The gymnast loses balance and a part of the body touches the floor; -There are a total of four hand movements (walking). -The legs separate for more than 3 seconds at a time. -The elbows are relaxed or bent (more than 0.1 deduction) for more than 3 seconds at a time. -The body has a significant arch or pike beyond the acceptable range (more than 0.10 deduction) for more than 3 seconds at a time. Once the stopwatch is stopped, it can no longer be started again even if the gymnast resumes the acceptable position; Score is recorded as time in seconds only: eg: 0:45 is 45 seconds up to a maximum of 0:60 seconds.

SHUTTLE RUN – 90 SECONDS

All together in two or three groups

EQUIPMENT	Regular competition floor with 12m X 12m boundary lines; One timer/recorder;
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	One assistant per gymnast;
FORMAT	No warm-up on competition floor; Six gymnasts can be tested at a time; Maximum one attempt per gymnast.
START POSITION	The gymnast lies on the stomach, legs together and stretched on the floor, feet together and pointed on the floor, arms and hands stretched forward on the floor, fingers behind the boundary line of the floor area.
MOVEMENT	The timer gives the command "SET" followed immediately by the command "GO"; On the command "GO", the gymnast stands up and runs to the opposite side of the floor touching the boundary line or beyond with the fingers of one hand. She then runs to the opposite side of the floor to touch the boundary line or beyond with the fingers of one hand. The shuttle continues for 90 seconds.
SCORING	The stopwatch is started on the command "GO"; The timer counts loudly "30 seconds", "60 seconds", "80 seconds" and gives the "STOP" signal at 90 seconds; If a gymnast assumes an incorrect position just before the command "GO" or performs a "false start" (moves before the command "GO"), there is a one lap penalty; the assessor will raise his/her arm to signal the infraction; The assistants monitor the start and confirm the touch of each boundary line or beyond for each lap. A lap (one way run) is not counted if the gymnast omits to touch the boundary line or beyond with fingers of one hand; the assessor will raise his/her arm to signal the infraction and state loudly "NO TOUCH"; The assessor counts the number of valid laps PLUS the last $\frac{1}{4}$, $\frac{1}{2}$, or $\frac{3}{4}$ lap if the corresponding point of the floor has been intersected by any part of the body at the "STOP" signal. Recording is in number of full lengths plus increments of 0.25 (representing a quarter of the floor): eg 13.25 is 13 and $\frac{1}{4}$, 14.75 is 14 and $\frac{3}{4}$.

10 LEG LIFTS

EQUIPMENT	Wall Bar. Blocks, Panel Mats, etc. that can be raised or lowered to just below the gymnast's horizontal legs when she hangs on the wall bar. A soft sponge or foam cube that the gymnast's legs can touch lightly at horizontal without providing them support.
FORMAT	Each gymnast may get 1 warm up turn.
START POSITION	The gymnast hangs on to the wall bars with legs together, straight, and held

	horizontal.
MOVEMENT	The gymnast lifts straight legs from horizontal to touch the bar with her feet and then returns straight legs to horizontal gently touching the foam.
SCORING	<p>Assessor commands "Ready" and "Go" starts timing when he/she says go.</p> <p>If the gymnast rests her legs on the mats, does not lower to horizontal, does not touch the bar, or has a form deduction of (greater than 0.1) that leg lift will not count. The assessor counts loudly the number of acceptable leg lifts and repeats the preceding number in case of an unaccepted leg lift. Ex, 1, 2, 3, 4, 5, 5, (not acceptable) 6, 7, 7 (not acceptable);</p> <p>Time stops when the gymnast touches the bar on her 10th Leg Lift.</p> <p>Time is recorded in the format ss:ms - ie:14:32 is 14 seconds and 32 milliseconds.</p> <p><i>Note: this methodology is recommended to emphasize the importance of active flexibility in addition to strength. While a modification could be made from full length hang, it is not recommended.</i></p>

PRESS TO HANDSTANDS

EQUIPMENT	Floor Beam or regular beam (height optional)
FORMAT	<p>One warm up turn is allowed.</p> <p>One attempt is allowed.</p>
START POSITION	Straddle-L perpendicular to the beam.
MOVEMENT	The gymnast performs as many presses to handstand (legs straddled) as possible. Gymnasts most demonstrate handstand with feet together to count.
SCORING	<p>Any presses without the timed balances described or with a form deduction (greater than 0.1) will not be counted.</p> <p>The assessor counts loudly the number of acceptable presses and repeats the preceding number in case of an unaccepted press. Ex, 1, 2, 3, 4, 5, 5, (not acceptable) 6, 7, 7 (not acceptable);</p> <p>The attempt is over when the gymnast touches the beam (with anything other than the hands) or touches the floor or has 3 attempts that do not count or pauses for more than 5 seconds between attempts.</p> <p><i>Modification: athlete stands in straddle on the beam and presses from straddle stand without jumping and returns to straddle L-sit. This should only be used for the very earliest stages of skill development in the Xcel/Compulsory categories.</i></p>

STANDING LONG JUMP

EQUIPMENT	<p>One competition floor;</p> <p>One stick of rectangular shape at least 1 meter long; (ideally meter stick)</p> <p>One start line marked with white tape (at least 5 cm wide) placed on the</p>
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	<p>floor;</p> <p>One chalk box and at least 1 chalk block placed on the floor near the start line.</p> <p>A measuring tape.</p>
FORMAT	<p>One warm up turn is allowed.</p> <p>One attempt is allowed.</p>
START POSITION	<p>The gymnast applies a thick layer of chalk under and behind her heels (before each attempt) and then, without walking stands behind the start line;</p> <p>The gymnast can stand on the tape (feet position optional) but her toes must not exceed the tape.</p>
MOVEMENT	<p>The general movement patterns selected to perform the long jump is optional, however the gymnast must take off with two feet from a fixed position.</p>
SCORING	<p>Gymnast lays on her back with feet at the start line and the assessor uses the straight edge to measure her height and then makes a chalk mark at this point.;</p> <p>The distance of the jump is measured on the floor surface from the gymnast's height mark to the closest contact of the body with the floor surface at the finish of the jump;</p> <p>Assessor states the length for each attempt;</p> <p>Assessor declares any invalid take-off.</p> <p>If the point of closest contact is not visible with the chalk, the assessor may let the gymnast try again.</p> <p>For each attempt, the number of complete centimeters (ex. 37 cm, 38 cm but not 48.5 cm) longer than body length is recorded.</p> <p><i>Modification/Addition: the same test can be performed as a vertical jump test. The athlete will stand against sideways with the closest arm to the wall reaching directly vertical, and a measurement will be taken by placing chalk on their hand and recording the highest point. Once the attempt is performed, the assessor will measure the distance between the static height and the jump height by the highest chalk marking. Assessor states the length for each attempt; Assessor declares any invalid take-off. If the point of closest contact is not visible with the chalk, the assessor may let the gymnast try again. For each attempt, the number of complete centimeters (ex. 37 cm, 38 cm but not 48.5 cm) longer than body length is recorded.</i></p>

LEG HOLDS (3 seconds)

EQUIPMENT	Balance Beam at FIG Height (125cm)
FORMAT	Each gymnast may get 1 warm up turn.
START POSITION	The gymnast stands at the end of the beam, right hand on the beam, her left side facing the assessor. For all holds the gymnast may stand on a flat foot with the free arm held obliquely upwards to the back/side. Posture is

	maintained throughout test.
MOVEMENT	Both legs must remain straight throughout all the lifts. No back swing or knee flexion-extension allowed in any lift. One score out of 8 is assigned for each leg position (total of 6 positions). The gymnast lifts her left leg straight forward from the floor. Next, the gymnast lifts her left leg back, keeping sternum facing forward. Next, the gymnast turns 90 degrees to face the beam, and lifts her left leg sideways. Shoulders and hips remain level. The process is repeated for the right leg, using the left hand on the beam, and her right side facing the assessor.
SCORING	The score is based the highest part of the foot held for 3 seconds. A score of 1 is assigned for horizontal, 3 for between horizontal and shoulder height, 5 for shoulder height to head height, and 8 for above head height. Scores are only provided for lifts with straight legs and level shoulders (good posture). No score for below horizontal.

BRIDGE

EQUIPMENT	Hard floor surface or equivalent of floor tumbling strip placed directly on the floor or hard surface covered with carpet.
FORMAT	One attempt per gymnast.
START POSITION	The gymnast lays supine with arms straight over head, and legs tight.
MOVEMENT	The gymnast then proceeds to set up for the bridge in whichever manner she chooses. The athlete must hold the furthest position for 5 seconds. The gymnast's thumbs must be touching, elbows straight, feet together and legs straight to receive any points.
SCORING	2 points- <90 degrees (shoulders behind wrists) 5 points- 90 degrees (shoulders directly over wrists) 8 points- >90 degrees (shoulders past wrists)

PIKE

EQUIPMENT	One firm box.
FORMAT	One attempt per gymnast.
START POSITION	The gymnast stands with toes at but not over the edge of the box with feet together and knees straight and hands in front of thighs.
MOVEMENT	The athlete in a controlled manner pikes forward reaching the hands down the legs (do not need to remain in contact), as far as they can. The athlete must hold the furthest position for 5 seconds. No bouncing or grabbing allowed.
SCORING	2 points- fingers at ankle height 4 points- fingers at edge of box 6 points- fingers past box 8 points- Wrist crease past box in a closed pike position

BOX SQUAT

EQUIPMENT	<ul style="list-style-type: none"> • One competition floor; • One box, foldie, or firm object that is to the height of the crease of the back of the knee of the athlete.
FORMAT	<ul style="list-style-type: none"> • One warm up turn is allowed. • One attempt is allowed.
START POSITION	<ul style="list-style-type: none"> • The athlete stands on foot width away from the box with feet shoulder width apart, feet slightly turned out, body neutral, arms straight out in front at shoulder height.
MOVEMENT	<ul style="list-style-type: none"> • The movement must be smooth. • The athlete must place full weight onto the box prior to standing up.
SCORING	<ul style="list-style-type: none"> • The gymnast is given directions to “perform a squat starting with the above directions for starting position, maintaining the knee in line with the middle toe, and the weight into the heels. • The movement must be smooth. • Points are given for: <ul style="list-style-type: none"> - 2 points knees over middle toes. - 2 points back stays straight throughout movement. - 1 point weight into heels (no lifting of heels) - 1 point smooth movement - 1 point starting position correct - 1 point ending position the same as starting position. • The assessor states the items for points prior to beginning. • The assessor gives the points given after first attempt and second attempt.

STANDING BODY ALIGNMENT

EQUIPMENT	<ul style="list-style-type: none"> • One competition floor
FORMAT	<ul style="list-style-type: none"> • One warm up turn is allowed. • One attempt is allowed.
START POSITION	<ul style="list-style-type: none"> • The athlete stands sideways straight in front of the evaluator. • Feet are together, knees straight, hips open, stomach pulled in, front ribs pulled into back ribs, upper back slightly round, head neutral, arms straight over head touching ears, palms facing inwards.
MOVEMENT	<ul style="list-style-type: none"> • The athlete stands in this position for 10 seconds.
SCORING	<ul style="list-style-type: none"> • The gymnast is given directions to stand with good body alignment for 10 seconds without movement. • Points are given for: <ul style="list-style-type: none"> - 1pt feet together & legs straight. - 2pt hips open - 2pt front ribs into back ribs.

	<ul style="list-style-type: none"> - 1 pt slightly rounded back. - 1 pt head neutral - 1 pt shoulders vertical & elbows straight. • The assessor states the items for points prior to beginning. • The assessor gives the points given after first attempt and second attempt.
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ACTIVE SHOULDER FLEXION

EQUIPMENT	<ul style="list-style-type: none"> • One competition floor; • One dowel (approx. 5cm diameter)
FORMAT	<ul style="list-style-type: none"> • One warm up turn is allowed. • One attempt is allowed.
START POSITION	<ul style="list-style-type: none"> • The athlete sits in front of a box that is approximately the height of the inferior angle of the scapula (approximately one adult hand width down from armpit), buttocks is against box, holding dowel on legs with hands shoulder with apart facing down elbows straight. • Stomach is pulled in, front ribs into back ribs, rounded upper back, head neutral.
MOVEMENT	<ul style="list-style-type: none"> • The athlete in one smooth motion lifts dowel overhead and holds the furthest position for 10 seconds maintaining the starting position with exception of the movement at the shoulder joint.
SCORING	<ul style="list-style-type: none"> • The gymnast is given directions of how to begin based on the starting position. • Points are given for: <ul style="list-style-type: none"> - 1 point legs together & legs straight, toes pointed. - 2 points front ribs into back ribs. - 2 points slightly rounded back. - 1 point head neutral - 2 points shoulders vertical & elbows straight. • The assessor states the items for points prior to beginning. • The assessor gives the points given after first attempt and second attempt.

Physical Testing Scoring Sheet

Name and Birth Year	Rope	Casts	Leg lifts	Long jump	Press	Shuttle Run	Handstand Hold	Flex RL Front	Flex RL Side	Flex RL Back	Flex LL Front	Flex LL Side	Flex LL Back	Bridge	Pike	Box Squat	Alignment	Should. Flex

For a deeper dive: Physiological Assessment Introduction and Instructions

What is it?

The Physiological Assessment consists of two parts: an injury screening protocol (Gymnastics Specific ROM Screen) and Physical Testing (Performance Based Gymnastics Functional Measurement Tool, or GMFT).

Where did it come from?

Heather Ramsbottom BSc., Bed., BPHE developed the Gymnastics Specific ROM Screen from current research as a tool to assist coaches to identify asymmetries that could lead to injury. It is able to be done by coaches, without the need for a physiotherapist, although it is recommended that any significant findings should be reported to a health care provider. The key to this protocol is that coaches can develop the skills to identify a likely injury, and take steps early to mitigate the causal factors. The Performance Based GFMT was recommended by H. Ramsbottom from the 2012 study of the validity of the same test developed in 2010. In that study, the relationship between the total GFMT scores and subject's current USAG competitive level was found to be good.

Who is this test meant for?

WAG athletes in levels 8, 9, and 10. Also applicable to Novice athlete who have not been unable to complete Gymnastics-Canada led physical testing sessions. Between 1 and 3 tests per year are required to maintain CSI target-athlete status in the following year. Coaches who have had experience with physical testing and want to take their knowledge to the next level should use the Physiological Assessment.

What happened to the testing that was introduced last year in 2019-20?

It has been modified based on feedback, and is still available. It has been modified for Xcel and levels up to JO 7. The Google Forms submission process has been discontinued at this time. This testing can be used in house for clubs, and is recommended for coaches new to carrying out physical testing.

How do I complete the Gymnastics Specific ROM Screen?

Instructions for completion is found in Appendix 2, pages 5-9 of the document: "Strength and Conditioning for Gymnastics" by Heather Ramsbottom:

<https://gymbc.org/public/uploads/Strength-and-Conditioning-Manual-2020.pdf>

How do I complete the Gymnastics Functional Measuring Tool?

The description of the test, and instructions for completing it, are found within the article, "Measuring Fitness in Female Gymnasts: The Gymnastics Functional Measuring Tool" by Mark D. Sleeper, MS, PT, OCS, Lisa K. Kenyon, PT, PhD, PCS, and Ellen Casey, MD:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3325636/>

Where do I find the testing sheets?

You can find the evaluation sheet at: <https://gymbc.org/womens-artistic-gymnastics-wag/> and look at the link titled, "Assessment Protocol Evaluation Sheet".

You can also find the periodization charts for full-year planning as well.

Ok, I have completed both tests with all my athletes. As a coach, what do I do with this information?

The Strength and Conditioning Manual will be able to guide coaches in the interpretation of this information. In particular, Appendix 3 gives an overview about what areas to focus on with any given score for the Range of Motion Tests. Any athlete who is showing a "Needs Improvement Score" on a given section will be directed to the relevant series of exercises and complexes designed specifically to address that issue.

You can further use future tests to determine if there has been improvement in the area of weakness, or refer the athletes to a health practitioner for additional screening.

If you have an athlete who needs to complete a given number of tests within a given year, you can send them to Crystal Gilhooly, WAG Coordinator cgilhooly@gymbc.org cc: John Carroll, Technical Director jarroll@gymbc.org to ensure they are counted towards the required points.