

## TERTIARY DANCE COUNCIL: PHYSIOTHERAPIST EXAMINATION

### GENERAL POSTURE:

- Leg Length Difference**

- Normal     Right approx    mm longer    \_\_\_\_\_  
 Normal     Left approx    mm longer    \_\_\_\_\_

- Postural Symmetry**

- Iliac crest height     Normal     Right high     Left high  
 PSIS height     Normal     Right high     Left high  
 Scapular position     Normal     Right \_\_\_\_\_     Left \_\_\_\_\_

- Head and Neck Posture**

- Normal     Poked     Retracted

- Scoliosis**

- Normal     Structural     Postural

- Lumbar Lordosis**

- Normal     Hyper     Hypo

- Pelvic Tilt**

- Normal     Anterior     Posterior

- Foot Posture**

- Right     Normal     Pronation     Supination  
 Left     Normal     Pronation     Supination

- Metatarsal Formula**

- Right     12345     21345     \_\_\_\_\_  
 Left     12345     21345     \_\_\_\_\_

- Hallux Valgus ("Bunion")**

- Normal     Right     Left

### LOWER LIMB:

#### HIP

Measurement	Right	Left	Optimal Requirement
Hip External Rotation (Hip Neutral) <ul style="list-style-type: none"> <li>• Active</li> <li>• Passive</li> </ul>	_____	_____	40° 45°
Passive Hip Internal Rotation (Hip Neutral)			>20°
Iliopsoas Flexibility			10°
Straight Leg Raise <ul style="list-style-type: none"> <li>• Foot Relaxed (Hamstring)</li> <li>• Foot Dorsiflexed (Neural)</li> </ul>	_____	_____	F = 120° M = 90° F = 110° M = 90°

**KNEE**

- **Patella (Kneecap) Mobility**

Right             Normal     Hypermobile     Hypomobile  
 Left              Normal     Hypermobile     Hypomobile

- **Knee Hyperextension**            Right: \_\_\_\_\_ cms    Left: \_\_\_\_\_ cms

**ANKLES AND FEET**

Measurement	Right	Left	Optimal Requirement
1st MTP Joint (Big Toe) Extension			90 °
Pointe			180 °
Soleus Flexibility (Plie)			8 -17 cm
Gastrocnemius Flexibility (Calf)			> 15 °

**TRUNK/SPINE**

- **Lumbar Spine (Low Back) Extension**

Range of movement     Normal     Hypermobile     Hypomobile  
 Control of movement     Good     Fair     Poor

- **Abdominal Stability Test**             5     4     3     2     1

**UPPER LIMB**

Measurement	Right	Left	Optimal Requirement
Shoulder Flexion (elevation)			180 °
Wrist Extension			90 °

**GENERAL COMMENTS:**

**DISCLAIMER:**

**I understand that the results of this screening can be discussed by the undersigned physiotherapist with the staff undertaking the auditions I will be attending.**

DANCER'S SIGNATURE: \_\_\_\_\_

PARENT'S/GUARDIAN'S SIGNATURE: \_\_\_\_\_

(Required only if the applying dancer is under the age of 18 years)

DATE: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

**DATE OF ASSESSMENT:** \_\_\_\_ / \_\_\_\_ / \_\_\_\_

**PHYSIOTHERAPIST:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_

**PHONE:** \_\_\_\_\_

**PHYSIOTHERAPIST'S SIGNATURE:** \_\_\_\_\_

## 1. GUIDELINES FOR PHYSIOTHERAPY EXAMINATIONS

This assessment should be completed by a nominated dance health professional (details below), signed and dated. It should take approximately 45-60 minutes to complete.

The dancer should ensure that:

- This physiotherapy assessment is completed by a physiotherapist with dance knowledge or experience wherever possible;
- Appropriate clothing is worn. The spine and limb measurements need to be viewed and therefore need to be visible. Accordingly, the dancer should be prepared to undergo the assessment in underwear or similar clothing (e.g. bike shorts and sports bra);
- He or she does not warm-up for the assessment ;
- He or she completes the questionnaire section of the assessment prior to presenting for the physiotherapy assessment ;
- A copy of this assessment is kept for their individual records.

The health professional should ensure that:

- The dancer is not warmed up prior to the assessment;
- All methods of measurement are closely adhered to;
- A goniometer and non-elastic measuring tape are used where necessary;
- The completed questionnaire is reviewed and commented upon where necessary.

This assessment should be completed by one of the dance physiotherapists from the Physiotherapy Association (Australia wide) where possible.

## 2. TESTING PROTOCOLS

The reliability of examination results can be influenced by:

- Between tester variability;
- Individual variability in the dancer being tested;
- Inherent errors in the testing procedures.

In order to minimise the level of variability between results, the testing procedures undertaken should be standardised. For this examination, the following protocols should be followed.

### GENERAL POSTURE

A visual observation is undertaken from the front, side and behind the standing dancer. Special observations are made of:

#### 1. **Leg Length Difference**

With the dancer in crook lying, he or she is asked to raise their hips off the ground and drop them back to the start position. The therapist then straightens the dancer's legs by grasping their ankles and compares the relative height of the medial malleoli.

#### 2. **Metatarsal Formula**

Feel the length of the metatarsals by palpating the base of the metatarsal shafts in the relaxed non- weight bearing foot. Relative lengths of the metatarsals should be noted from the longest to the shortest. For example, in a foot which the second metatarsal is longer than the first, third, fourth and fifth respectively, the measurements is noted as 21345. If the first is longer or equal to the second the formula is 12345.

#### 3. **Hallux Valgus**

If the line of the first metatarsal shaft and first phalanx of the big toes deviates towards the little toe by a measurement of greater than 10 degrees it is noted as hallux valgus + presence of thickened tissue over the joint line (bunion).

## LOWER LIMB

### 1. Hip Rotation (Hip Neutral)

The dancer lies in supine with knees bent over the end of the plinth. The resting leg is lifted to place the foot flat on the end of the plinth (knee bent to ceiling). The following measurements are undertaken:

- a) The dancer is asked to actively externally rotate the test hip. The pelvis and thigh must remain flat on the plinth. The angle between the tibia and vertical is measured.
- b) This test is repeated with the examiner over-pressing external rotation and measuring the angle between the tibia and vertical. The pelvis and thigh must remain flat on the plinth.
- c) The examiner overpressures internal rotation and measures the angle between the tibia and vertical. The pelvis and thigh must remain flat on the plinth.

### 2. Iliopsoas Flexibility (Modified Thomas Test)

The dancer perches on the end of the testing plinth and rolls back to lying whilst holding both knees to the chest. The dancer is asked to keep hold of the contralateral limb in maximal flexion of the hip as the tested thigh is lowered towards horizontal (knee is relaxed into flexion). The dancer should relax the hip and thigh muscles. The angle of hip flexion is measured with a goniometer between the horizontal and the long axis of the femur (between the greater trochanter and the lateral tibial condyle). The hip angle is recorded as positive or negative from the 0° axis (horizontal). For example, -7° denotes a hip flexed above horizontal, 12° represents a thigh that lies below the horizontal.

### 3. Straight Leg Raise

With the dancer lying in supine, the leg is raised and over-pressured with minimal pelvic tilting. Slight hip adduction should be maintained and hip external rotation prevented.

- a) the foot is held in a relaxed position in order to measure the length of the hamstrings
- b) the measure is retested with the ankle dorsiflexed in order to measure the length of the neural structures.

### 4. Patella Mobility

With the dancer in long sitting and quadriceps relaxed, palpation of each patella is undertaken and the relative mobility laterally is noted.

### 5. Knee Hyperextension

With the dancer in long sitting on a plinth, he or she is asked to actively dorsiflex the ankle and straighten the knee fully. The distance between the heel and the top of the plinth is then measured in centimetres

### 6. 1st Metatarsophalangeal Joint Extension

With the dancer in long sitting, the first MTP joint is over-pressed (passively) into extension. The angle measured is between the line of the shaft of the first metatarsal and the proximal phalanx.

### 7. Pointe

With the dancer in long sitting, the foot is pointed (active plantarflexion). The angle between the line of the fibula and the 5th metatarsal is measured. The talocrural joint is the fulcrum. If the measure is over 180 degrees the larger ankle is the measure.

### 8. Soleus Flexibility (Plié)

With the dancer standing in front of a wall, he or she performs a demi plié in parallel on one leg to touch the bending knee to the wall (heel stays in contact with the ground, knee bends over the second toe). The distance from the wall to the big toe is measured and noted.

### 9. Gastrocnemius Flexibility

With the dancer standing with the ball of their foot on the edge of a step, measure the angle between the fibula and the fifth metatarsal as the heel is dropped over the edge (the leg is kept straight, ankle is the fulcrum).

**10. Lumbar Spine Extension**

With the dancer in standing, lumbar spine extension is observed with particular attention paid to:

- a) range of movement available
- b) control of the movement afforded by the lower abdominals (transversus abdominus) - especially as the dancer returns to the upright position

**11. Abdominal Stability Test**

The main purpose of this test is to assess the stabilising function of the abdominals. The dancer is instructed to hollow the abdominals, maintain a neutral spine position and keep the trunk and pelvis level. The tester palpates the abdomen for continued contraction throughout the test. One hand can be placed under the dancer's low back to encourage and facilitate the dancer to maintain the position. Failure to complete the test occurs when the back arches or tension is lost from the palpation.

- The 5 tests are performed in crook lying (dancer lying on their back with the knees bent and feet on the floor)
- Grade 1: the dancer is able to maintain the spine and pelvis position while lifting one bent leg to a hip angle of 90 degrees flexion and returning it to the bed
- Grade 2: the dancer maintains the spine and pelvic position, while the first leg is lifted off the bed and lifting the second leg off the bed to the same position as 1 and down
- Grade 3: the dancer keeps one leg off the bed at 90 degrees hip flexion and maintains neutral spine and pelvic position while extending the other leg sliding it out and returning to the start position
- Grade 4: the dancer is able to maintain neutral spine and pelvic position while extending both legs from the raised crook lying position out together with heels touching plinth and return to raised crook lying
- Grade 5: the dancer is able to maintain neutral spine and pelvic position while extending both legs from the raised crook lying position out together without heels touching the plinth (5cm above plinth) and return to raised crook lying. Examiner places hands under heels to catch if dancer cannot maintain abdominal control

**12. Shoulder Flexion**

In standing and with the thumbs facing forwards, the dancer raises both arms forward and above the head as far as possible. The angle between the long axis of the humerus (between the superior tip of the olecranon process and the midpoint of the lateral border of the acromion process) and the vertical (using the lateral midline of the iliac crest as a guide) is measured.

**13. Wrist Extension**

The dancer's wrist is over-pressured into extension and the angle between the line of the 5th metacarpal and the shaft of the ulna is measured.