

Warm Up & Cool Down

One of the biggest preventions of injury

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- The session leader should:
 - Understand the importance of adequate warm up/cool down before and after exercise, of allowing sufficient time, and the components that make up an effective warm up/cool down.
 - Understand the psychological benefits of warm up/cool down
 - Understand the need to incorporate this into the class structure for younger students, and to ensure older students incorporate warm up/cool down into their dance activities.

(Bramley, I. 2002)

Responsibility

- “ Both warm up and cool down are associated with a number of physiological and psychological benefits such as injury prevention, control of muscle soreness, enhanced energy production and discharge of frustration”

- (Koutedakis & Sharp, 1999)

Why?

- “Louis Galli found that Broadway dancers who took at least two classes a week and warmed up before performance were injured 70% less often than those who did not”

(Brinson & Dick, 1996:52)

Why?

- Task:
- Together list reasons for why we warm up
- Discuss

Task

- Gradual warm up can help participants cope with exercise induced asthma
- Reduces risk of DOMS (Delayed onset muscle soreness)
- Increase in anaerobic power
- Increase in speed of conduction of impulses by nerves
- Increase in body temperature
- Increase in muscular strength output
- Delay of onset of fatigue

Why warm up?

- Improved joint mobility and muscle flexibility
- Increase in heart rate and blood supply to working tissue
- Oxygen intake is used more efficiently
- Increase in aerobic capability (stamina)
- Increase in neuromuscular coordination
- Decreases risk of nausea in high intensity activity
- Increase in self discipline

Why warm up?

- Increase in concentration
- Decrease in emotional stress
- Decrease in anxiety
- Increase in motivation
- Increase in reaction time
- FACT: It is necessary to raise body temperature by at least 2 degrees before changes become significant

Why warm up?

- “Optimal warm up can lead to better executed movements, which in turn can lower the risk of injury”
(Koutedakis & Sharp 1999:166)
- “Passive warm ups do not have the same beneficial effects as its active equivalents”
(Koutedakis & Sharp 1999:166)

Why warm up?

- Warm up should begin every class, rehearsal, or stage performance
- Duration of warm up depends on individual levels of fitness, time of year and the following activity
- The intensity depends on level of fitness
- A comprehensive warm up routine takes approximately 20 minutes
- Sweating does not always indicate optimal warm up

Principles of a Warm Up

- Resting periods between warm up and rest of class should not be longer than 10-15 minutes (if given a rest at all)
- Dance studio should be heated to approximately 21 degrees
- Dancers should be dressed to suitably avoid heat loss
- Exercises should be selected to suit individual needs
- Complexity should be varied to avoid boredom

Principles of a Warm Up

- Warm up should progress from simple to complex and from large to small muscle groups.

(Koutedakis, 1999)

Principles of a Warm Up

1. Preparatory

- 5-10 minutes
- Aims to activate the cardiovascular system (e.g. gentle jogging/running activities)
- Finish with gentle stretches of large muscle groups

3 Stages of a Warm Up

2. Main

- 10-15 minutes
- Stimulation of energy pathways, elevation of muscle temperature and injury prevention
- Jogging/running activities at a higher intensity than stage 1.
- Deeper stretches of all muscle groups.
- Sweating should reach moderate levels

3 Stages of a Warm Up

3. Individual

- 5-10 minutes
- Exercises specific to dance movements and muscle groups used in the session
 - Dancers should include movement patterns that are to be performed during the class

3 Stages of a Warm Up

- Plan a warm up specific to your genre of dance.
- Share with group.

Task

- “Cooling down reduces the levels of excess hormones generated during vigorous activity and slowly lowers heart rate and body temperature. With appropriate stretches it can also help to prevent subsequent muscle soreness”

(Brinson & Dick, 1999:54)

Why cool down?

- “Cool-down is as critical for dance and long-term fitness as warm-up. Just as warm-up is a step between rest and successful dance, cool-down is a step from dance to recovery”

(Koutedakis & Sharp, 1999)

- The Problem - Often forgotten!

Why Cool Down?

- Prevents pooling of blood and sluggish circulation
- Removes metabolic waste products (lactic acid) – therefore prevents muscle soreness
- Body acidity returns to a balance
- Attains emotional balance
- **Gradually** reduces heart rate, stroke volume, blood pressure preventing dizziness
- Smooth re-adaptation of body temperature
- Reduces risk of DOMS
- Boosts rate of recovery

Why Cool Down?

- Approximately same time as warm up
- Specific to session participated in – movements and muscle groups
- The same stages described in 'Principles of a warm up' may be adopted but performed in reverse order

Principles of Cool Down

- Brinson, P & Dick, F (1996) *Fit to Dance?* Calouste Gulbenkain Foundation: London
- Hamilton, L (2009) *The Dancer's Way* St Martin's Griffin: NY
- Koutedakis, Y & Sharp, NCC (1999) *The Fit and Healthy Dancer* Wiley & Sons: Chichester UK
- www.danceuk.org
- www.iadms.org

Further Reading