

WARM UP

INSTRUCTOR NOTES

There are 4 basic elements to a warm up:

1. **CARDIOVASCULAR WARM UP**
2. **MOBILITY**
3. **STRETCH**
4. **REHEARSAL (MOTOR NEURONE)**

The aim of the warm up is to prepare the body for the activity to come. It prepares joints, muscles, the cv system (by increasing blood flow to muscle groups and thus increasing oxygen supply) and also motor neurone pathways

1. **CARDIOVASCULAR WARM UP**

This relates to the heart and system of blood vessels in the body

- This should be a **gradual** process e.g. start with walking then gentle jogging – then running.
- It should include free flowing movements designed to gradually raise the heart rate.
- Blood will be diverted from internal organs to the working muscles. So this explains why you should not eat just prior to training.

In planning the warm up (and the following session) you should bear in mind the three energy systems:

1. ANAEROBIC (ALACTIC)
2. ANAEROBIC (LACTIC)
3. AEROBIC

ANAEROBIC (ALACTIC): A very short term energy system which uses no oxygen and relies on fuel stored within the muscle. This system operates for 10 seconds or less and cannot be sustained for longer.

ANAEROBIC (LACTIC ACID): Also short term. Again uses no oxygen but produces lactic acid as a by-product. Can fuel activity for 10 – 30 seconds before fatigue sets in (caused by the build-up of lactic acid).

AEROBIC: A long term energy system which uses oxygen and produces by-products (carbon dioxide, water and heat) which can be removed from the body.

Make sure you use aerobic work in the warm up section

2. **MOBILITY**

This relates to joints

Joints are produced where bones meet. Joints which are freely moveable (e.g. elbow, hip, knee etc) are called synovial joints because they produce synovial fluid.

Synovial fluid lubricates and protects joints. It is absorbed by cartilage and acts as a shock absorber. The production of synovial fluid is triggered by movement of the joint.

The mobility section of the warm up should include:

- Full range of motion (in a controlled manner) for all major joints to be used in the session.
- The movement should be within normal, but full range and follow the normal use of the joint

Some mobility exercises will naturally be accomplished by other elements of the warm up e.g. running 'heel to bum' will mobilise the knee, yokomen/shomen strikes will mobilise the shoulder.

Mobility and cardiovascular work raises the temperature of the tissues surrounding a joint (ligaments and tendons) making them more pliable and less susceptible to injury.

3. STRETCHING

This relates to muscles and must be addressed as a separate segment.

- Never stretch until the body is warm.
- Stretching should always follow the cardiovascular and mobility sections of the warm up
- Ease into each stretch and never go to the point of pain. A gentle 'pull' should be felt in the body of the muscle being stretched
- Never use bouncing or jerking movements
- Do not hold your breath while stretching – breathe easily
- Try to be in a relaxed position
- Hold each stretch for around 10 seconds but ensure you keep moving in between stretches so that the body keeps warm
- You should stretch all major muscles which are to be used in the session. Aikido is a 'whole' body activity and so all major muscles must be stretched.

Dynamic Stretching: this is a stretching technique which involves moving whilst stretching. It can be a more functional approach to stretching – and is considered by some to be a more 'modern' approach. Ensure that you fully understand the principles and techniques of dynamic stretching before you use this method.

4. REHEARSAL

This relates to co-ordination and brain activity

If possible you should choose exercises in the warm up which use similar skills/exercises to those required in the session. This will offer rehearsal opportunities and 'prepare' the motor neurone pathways to be used in the session.

For example, think about using tenkans, circles, controlled strikes etc in the warm up.

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ONLY COACH LEVEL 1 INSTRUCTORS WITH PI MAY TAKE THE WARM UP.

Do not allow anyone to do breakfalls until after the warm up.

Prior to your warmup the only thing students should do is general limbering up – technique practice without breakfalls, kihon dosa etc