

The following recommendations and guidelines are courtesy of the Academy's principal, Judith-Elisa Kaufmann, an international university lecturer for dance science, dance medicine, and dance pedagogy. They paper is based on Kaufmann's book (see the credits at the end of the document) and lecture scripts of the Academy for Ballet- and Dance Pedagogy & Dance Medicine, Austria (www.tanzpaedagogik.eu).

Home-training for professional dancers: Recommendations based on science of training & dance medicine

Training at home in isolation due to the Corona pandemic can be equally demanding for dancers as it can offer a possibility to explore new ways based on (dance) science of training, through which it can multiply the dancer's skills, performance abilities, and overall fitness.

The recommendations can serve professional dancers of all dance styles. Weekly training schedules should be based on the following aspects:

1) WARM UP:

General increase of body core temperature, in order to enhance performance and prevent injuries

- a. 10-20 minutes all together
- b. Bouncing, swings, jogging on the spot, rope skipping
- c. Dynamic combinations of the above-mentioned of 5-10 minutes
- d. followed by alignment, strength, and proprioception training (see below) on low to medium intensity (50-60% of heart rate maximum).
- e. Dynamic stretching can be used to finish the warm up session

2) DANCE TECHNICAL TRAINING:

- a. daily or every second day: 60 to 120 minutes
- b. technique training in the very dance style ("the class")
- c. includes pointe work (female) and preparation for lifts (male, Pas de Deux) in classical ballet

3) AEROBIC FITNESS / ENDURANCE TRAINING:

- a. 2-4 aerobic sessions per week
- b. each with a duration of 30 to 60 minutes
- c. jogging [treadmill indoors; outdoor training recommended, if possible]
- d. cycling [ergometer indoors; outdoor training recommended, if possible]
- e. rope skipping
- f. step-aerobics

4) STRENGTH- & STRENGTH ENDURANCE TRAINING:

- a. according to dance style and sex of the dancer
- b. 2-4 sessions per week
- c. each with a duration of 20 to 40 minutes

- d. Training of strength, strength endurance, dynamic alignment, and proprioception (dynamic and static balances with eyes open and closed, on wobbly surfaces, such as wobble boards or rolled up mats)
- e. Can include the use of yoga mats, therabands®, Deuser®bands, dumbbells, blackrolls balance boards, wobble boards, parasetter®, dynamic footprints or other rotator-discs, Gymnasticballs, Thera-Balls, expanders, Pilates® props, and other tools used in dancer training
- f. Pilates, Gyrokinesis®, Gyrotonics®, Feldenkrais®, Alexander Technique® or other somatic training regimes can enhance the training effect.
- g. parts of this training block can be included in the dancer's warm up session AFTER the generic warm up in order to prevent injuries and enhance performance.

5) POWER TRAINING & PLYOMETRICS:

- a. Plyometric training targets jumping abilities through specifically designed explosive power training. It is a special training used by dancers and other athletes, which explores and trains the tendons' abilities to store kinetic energy in the course of the stretch-shortening-cycle preceding a jump. The dancer tries to minimise the duration of floor contact before and between jumps.
- b. Can be included into daily technique class or performed 2-3 times per week as separate sessions (warm up sufficiently, when training separate sessions!!!)

6) FLEXIBILITY, STRETCHING, & COOL DOWN:

- a. (Static and dynamic) stretching can be used as cool down/warm down after each training session to maintain or increase long term flexibility

7) SOMATIC TRAINING:

Yoga, meditation, Ideokinesis / Mental training, specific breathing techniques for dancers, as well as dancer specific pelvic floor training can be recommended to help dancers through the time of isolation but also to reduce stage fright when back on stage.

Aerobic endurance in dancers...

Dancer training is usually intermittent in design, with shorter, anaerobic peaks alternating with minutes donated to explanations and corrections (or other groups dancing). Traditional dance technique training, especially in ballet, modern, and jazz, does not sufficiently target aerobic endurance, which is but required on stage.

Aerobic endurance (stamina) is a key factor for...

- injury prevention (prevents fatigue, helps to stay focused and concentrated over longer periods of intense training)
- performance enhancement (enhances co-ordination, overall fitness, cardio-pulmonical performance, and metabolism)
- and regeneration (allows for faster regeneration after training through enhanced metabolism, sufficient adaptation to mechanical loading = training, and therefore earlier and stronger return to the next training session)

Hence, well trained aerobic endurance enables a dancer to train and perform to his/her individual maximum.

Goal setting: motivation, discipline & pre-defined times of rest as essential part of (planning of) training

Dancers are known for their disciplined dedication to face high workloads and ongoing efforts to perform better than they did the day before. However, many dancers don't have individual frames of reference as to how much is enough and when training should be alternating with sufficient resting periods. **Without sufficient rest, performance cannot be enhanced and the risk of overtraining and chronic injuries rises**, the latter leading to anxieties, pain, stress, and loss of motivation (check out the terms "supercompensation" or "progressive overload", which are key aspects of professional and efficient science of training).

Especially in times of isolation, where the planning of training lies with the individual dancer, **clear and predefined goal setting is essential!**

- use schedules, which you write down
- tick off achievements for your own feeling of pride and enjoyment, which will enhance motivation
- use dance diaries to make sure you do not lose the overview and balance between training and resting periods
- think about sufficient nutrition and water intake
- map out your goals as specifically as possible: goals should be predefined, challenging but realistic, and you should enjoy and mark their achievement to allow your motivation to rise and yourself to relish your resting phases.

Last but not least: Re-think the well-known saying „No pain, no gain!“ in a dancer's (your?) life. It should be replaced by other quotes such as „**Quality over quantity!**“, „**The prevention of overuse is the control of use!**“ [I. Siev-Ner] and „**Only a maximum of health and well-being leads to a maximum of performance in a dancer**“ [J.-E. Kaufmann]

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as well as lecture scripts and seminar papers of the Academy for Ballet- and Dance pedagogy & Dance Medicine, Austria. © 2020 All rights reserved.