Injury Prevention and Rest

Touch points: Burn out

Farah Fadzali, August 2020

With the trend of increasingly challenging choreography being created, the demands placed on both pre-professional and professional dancers have increased significantly. Technical and physical expectations continue to push the boundaries of stamina, strength, flexibility and athleticism. In order to meet these requirements, dancers need to adapt or increase the duration of their training, resulting in longer working hours at a greater intensity. This increase can cause considerable negative effects on the body. However, the detrimental effects of fatigue (exhaustion) can be reduced, if sufficient rest and recovery periods are scheduled and used effectively[11]. There can be a stigma of taking a break is seen as a dancer being 'lazy'. But it is important for a dancer to be aware of their own recovery needs and know when they can push their training as our body works better when we gradually build up strength.

Benefits of rest

Chua Pei Yun, Freelance dancer / dance instructor

Rest can take form in many ways. For example, it can range from sleeping to taking time out, reduced amount of activity or doing something completely different. Why is rest much needed? Rest and recovery is needed for training adaptations to occur and to avoid overtraining. During exercise, muscles' glycogen (energy storage) levels depletes and microdamage occurs in the muscles following bouts of physical action and muscle contraction[1,5]. If these stores are not replaced, chances are one will experience muscle soreness and fatigue as muscles require glycogen to function (even when you are not working out). After repeated bouts of high impact movements, a rest period should be included. Rest could also mean altering of exercises in order to lower the impact and intensity. By getting adequate rest, you will prevent fatigue by letting your glycogen stores refill. Hence, rest should be included in your weekly training.

How much sleep do we need as dancers?

We all know that sleep is important for various aspects of our brain function but how much of it is considered enough, especially for dancers? With the appropriate amount of sleep, complete rest helps to repair damaged tissue and improves efficiency in performance output. Studies have shown that a good night's sleep (an uninterrupted or REM sleep) can improve motor performance and lack of adequate sleep can be a risk factor for performance-related musculoskeletal disorders (injuries that affect muscles, tendons, ligaments and nerves) [2, 9]. Although the amount of sleep required varies from one individual to another, the US National Sleep Foundation recommends 7 to 9 hours of uninterrupted sleep a night for adults and more than this for those younger than 18 years of age[6]. As such, dancers requires approximately **8 hours of sleep a night**[11].

Types of rest we can learn to take as dancers

Active rest is when dancers take a break from their usual dance routine but remain physically active at a less strenuous level as compared to their usual training. For example, attending a physical/dance class of a different genre (without the training pressure of the original dance class). This not only allows dancers to maintain their fitness levels, it also allows for some physical recovery and psychological rest. Adequate amount of mental rest will restore the mind by helping to quieten and realign thoughts and memories from the day, reduce both stress and anxiety levels, regain focus and support goal setting and imagery. For example, doing a short meditation for 2 minutes prior to a dance class or 5 -10 minutes at the end of the day.

Another type of rest is constructive rest. Practicing constructive rest (a resting position) is also highly encouraged. A constructive rest is when a dancer is lying on their back, with eyes closed and arms by the side of the body with palms facing upwards (similar to yoga). This position supports the body in releasing stress and tension. This type of rest too can be added into the last bit of the cool down phase in a dance session[11].

Overtraining and burnout

Chua Pei Yun, Freelance dancer / dance instructor
Photo credit: Kuang Jing Kai

Burnout is the result of overtraining[7,8,11] that can be recognised when a dancer is facing constant fatigue or shows behavioural and emotional changes[7,8,11]. Studies have shown that burnout has been known to cause athletes to withdraw from their activity, and described it as psychological syndrome of emotional exhaustion and a reduced sense of performance accomplishment [10, 12]. By increasing the awareness of rest, recovery, overtraining and burnout, dancers and dance practitioners are able to reduce the negative physical and emotional outcomes of overtraining.

Some of the physiological effects of burn out include:

(Short term effects, ~ 1 month)

- Increased normal resting heart rate (HR) by 5 – 10 beats per minute (bpm)
- Increased lactic acid concentration (muscle soreness/fatigue)
- Longer time for HR returning to resting HR
- Decreased ability to use oxygen during sub-maximal exercise

(Long term effects, several months)

- Cessation of menstruation may occur in female dancers
- Loss of maximal voluntary muscle force
- Increase susceptibility to infections in the upper respiratory tract
- Increased rates of allergies and minor injuries may heal slowly

Table 1 and 2[11] below shows a comparison on the consequences of inadequate rest and increased training versus when there is sufficient amount of recovery periods.

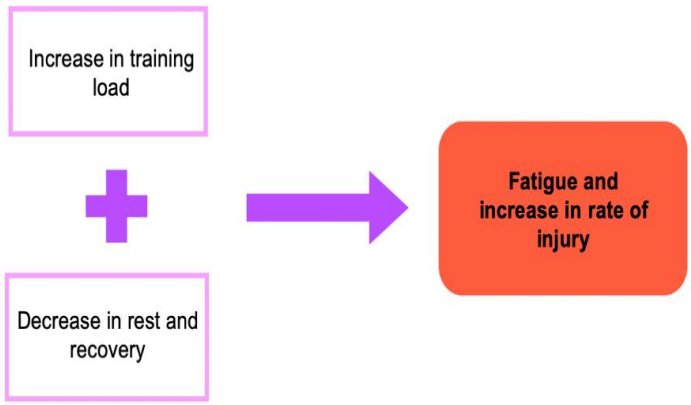

Table 1. Fatigue and increase of injury rate

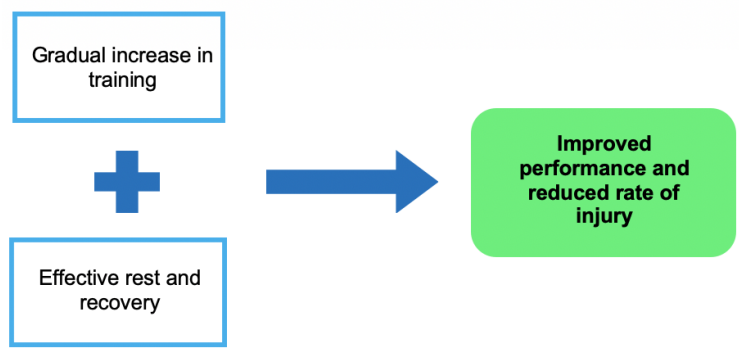

Table 2. Improved performance and reduced rate of injury

Below are some points to avoid overtraining:

- Aim to get adequate amount of sleep every night
- (Where possible) have at least one or two days off from dance training per week.
- It is best to have other hobbies/interests besides dance
- Improve knowledge regarding the importance of rest and recovery for positive progression in dance
- Regularly refuel and rehydrate
- Gradually increase training intensity and alternate between work and rest periods

Alternative methods to consider to prevent burnout

- Periodisation

Chua Pei Yun, Freelance dancer / dance instructor
Photo credit: Chua Pei Yun, Instagram

Periodisation is used extensively in the training of elite athletes. It dictates that working consistently at high intensities is detrimental to both physical and mental progression. Hence, periods of training that include peaks and troughs in intensities are essential. The aim is to promote gradual and systematic progression of training through pre-planned cycles that vary in intensity and volume, allowing recovery and avoiding overtraining of the body's system [3, 10]. Read more about periodisation in our previous article here.

- Tapering

Another method incorporating rest and recovery into dance schedule is to include tapering period before important dance events. This period is where dancers reduces their training to allow for healing of damaged tissues and for both physiological and psychological rest, in order for the body's energy reserves to be fully replenished immediately before performance or competition[11].

End

An MSc in Dance Science graduate from Trinity Laban Conservatoire of Music and Dance, Farah has multiple experience in teaching movement therapy in various organisations in Singapore.

Farah is now a dance science researcher studying injury prevention and performer's health and safety practices. Together with her achievements and qualifications, Farah hopes to work towards the development of dance science research in Singapore.

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