ASPAH Australian Society for Performing Arts Healthcare

Fatigue and recovery for performing artists

Fatigue

Fatigue can be described as a general feeling of tiredness, often accompanied by a decrease in performance. When you are undertaking high training loads, short-term fatigue is expected and is essential for adaptation and improvement. However, longer lasting fatigue that is not balanced with adequate and appropriate recovery can lead to impaired performance and negative outcomes such as under-recovery, overtraining, and burnout. To perform at their best, performing artists need to recognise different types of fatigue, and to know appropriate strategies for recovery.

High training loads or intense performance schedules can lead to four types of fatigue: metabolic fatigue, neural fatigue, psychological fatigue, and environmental fatigue. You may experience these independently or you could experience two or more at the same time. Metabolic fatigue relates to energy depletion and may be addressed through hydration and nutrition. Neural fatigue, which relates to the central nervous system (brain) and the peripheral system (muscles), may be overcome through physical and mental recovery strategies. Psychological fatigue relates to emotional, social, and cultural stress and should be addressed with psychological recovery strategies. Finally, environmental fatigue results from stressors such as climate and travel, and may be an issue for touring performing artists or those working in poorly equipped studios or locations.

Recovery

Recovery is the process of restoring full physiological and psychological function. Adequate recovery allows for increases in quality and quantity of training, and may reduce the risk of overuse injuries. Performing artists encounter stress from a number of sources, both training and non-training related. Achieving a balance between stress and recovery is essential for optimal performance.

Understanding the recovery process allows you to assess your fatigue and recovery, and to monitor your adaptation to training. By managing the different types of fatigue, you can 'bounce back' quickly and be ready for your next training/practise session. There are many benefits to recovery. They include reducing the incidence of training-related illness and injury (e.g., overtraining and burnout); and promoting adaptation to training stressors. By improving self-management skills, you learn how to care for yourself as a performer, and you acquire good habits for life post-career.

Current evidence regarding the most beneficial modalities for enhancing recovery is inconclusive. It appears that adequate rest/sleep, nutrition, and hydration are the most effective strategies for optimal recovery. However, performing artists who use a range of fatigue management and recovery monitoring strategies improve their chances of achieving recovery-stress balance and optimal performance.

Types of recovery

Recovery strategies for performing artists can be described as passive, active, or pro-active. Passive recovery strategies include rest, sleep, sauna, massage, sitting or lying quietly, and using physiological reactions to stimuli (e.g., heat, cold, pressure) to return to your pre-performance state. Active recovery uses moderate physical activity with the specific aim of overcoming the effects of fatigue (e.g., participating in a cool down program directly following performance). Pro-active recovery refers to any self-initiated and purposeful action chosen by the performer to enhance recovery (e.g., dynamic stretching or breathing exercises during intermission break in a performance). Performing artists benefit from at least one rest day each week.

Monitoring recovery

Performing artists can use a combination of objective and subjective measures to monitor wellbeing and avoid poor performance and negative health outcomes. Objective measures include physiological and biochemical markers related to under-recovery and overtraining, and may involve monitoring heart rate, oxygen consumption, or blood markers. Subjective measures look at psychological signs of overtraining including disturbance to mood and changes in perceived stress and recovery.

Recovery monitoring can be useful for identifying individual recovery needs. Each performing artist will have a different and unique response to training and non-training stressors. Recovery monitoring can help you to increase your knowledge about your personal recovery needs.

How should I monitor myself?

Self-monitoring helps the performer to assess their level of recovery and develop recovery strategies for their personal needs. Factors to monitor include resting heart rate, quality of sleep, levels of energy and fatigue, muscle soreness, self-confidence and self-esteem, attitude to school/work/social life, and health (injuries, illnesses, menstrual cycle). It is important for you to be able to recognise how you feel. If you notice changes in any of these areas, you should take the appropriate steps to enhance recovery efforts in these areas. A daily log or diary will help you to evaluate stress levels and adaptive responses. Your daily log should be simple so that it's easy for you to maintain. It could look something like this:

How well did you sleep last night?						
Terrible	1	2	3	4	5	Like a baby
How tired/worn out are you feeling today?						
Totally exhausted	1	2	3	4	5	Energized and ready to go!
Do you have any physical soreness today?						
It's hard to move	1	2	3	4	5	Not at all
How confident are you that you can achieve your goals?						
Not confident	1	2	3	4	5	Extremely confident

Which recovery strategies should I use?

To achieve and maintain recovery-stress balance, you should aim to match the recovery strategy with the recovery deficit you notice in your daily monitoring log. For example, if you have noticed a decline in your quality of sleep then you should focus on improving the quality and quantity of sleep you are getting (see the ASPAH Guide 'Sleep for high performance'). Some potential recovery strategies are included below.

Nutrition and hydration: diet affects health and performance, so it is important that you make sure you refuel and rehydrate following training and performances. A balanced diet will help support training and may prevent excessive fatigue, illness, and injury. Dietary requirements will vary depending on individual needs and workloads.

Work to rest ratios: include work to rest ratios in training and planning; schedule passive recovery (do nothing, meditation, sleep) and active recovery activities (a light jog, walk, swim, or cycle; Pilates, yoga, and

cross training activities) after performances and training. Your daily program should help balance the physical and psychological demands of training and performance. Rest days are essential and ideally one day per week should be a non-training day. Taking time out from your training provides you with the opportunity to engage in physical and psychological recovery as well as allowing time for other interests and personal relationships.

Physical therapies: may include hydrotherapies (e.g., spas, saunas, pools, ice baths, contrast temperature protocols); sports massage; acupuncture; and compression garments. Evidence is mixed regarding the effectiveness of these modalities in improving recovery, however, they may provide physical and psychological relaxation which in turn will benefit recovery.

Psychological recovery techniques: may include debriefing after a performance; resilience or mental toughness training; emotional recovery strategies after severe stress or trauma; and time away from training, including socialising with friends and family. Relaxation techniques such as meditation, progressive muscle relaxation, visualisation, breathing exercises, flotation, and music can also have benefits for psychological recovery. Relaxation techniques should be practised on a regular basis to become effective tools for aiding recovery.

Helping performing artists improve their skills

By integrating monitoring into their training schedules, institutions can structure training timetables and rehearsals etc around artists' levels of recovery. This strategy reinforces the importance of recovery as an essential part of the training process.

Teachers, coaches, trainers, directors and other industry leaders can also benefit by helping performing artists to understand, plan, and use individual recovery strategies, with the ultimate aim that they will manage these for themselves. Effective monitoring and recovery management will enable both the teacher/director and artist to achieve more productive training, better and more consistent performance, a reduction in training injuries and illnesses, and the development of sound self-management strategies.

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