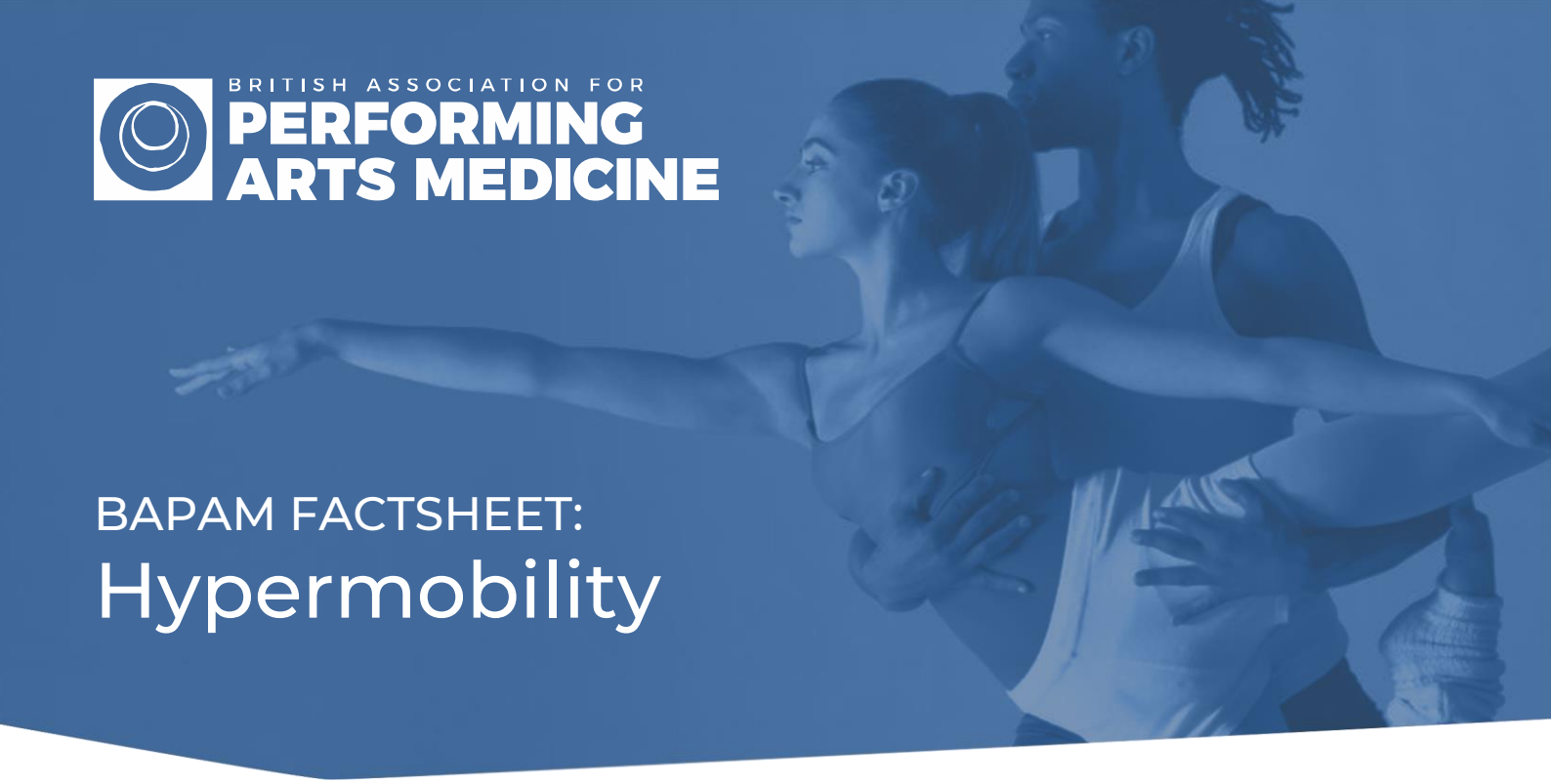
BRITISH ASSOCIATION FOR PERFORMING ARTS MEDICINE



BAPAM FACTSHEET:

Hypermobility

In this Factsheet:

What is Hypermobility?

The term hypermobility is used to describe joints that can move beyond the normal range expected for someone of the same age, sex, and ethnicity. A joint may be hypermobile due to genetic factors such as the shape of the joint surfaces or a person's collagen type; or they may have acquired hypermobility through injury or undergoing certain types of training from an early age. A person could have one or many joints that are hypermobile. Widespread hypermobility, where several joints are hypermobile, is termed Generalised Joint Hypermobility (GJH).

Hypermobility is not a clinical disorder, and most people are asymptomatic. However, in others, hypermobility can be accompanied by musculoskeletal problems such as persistent joint pain, soft tissue injuries, disturbed proprioception (the ability for the joints to sense their position) or other traits. If this is the case, it can be a sign of a hereditable disorder of connective tissue (HDCT) such as Hypermobility Spectrum Disorder (HSD) or Hypermobile Ehlers Danlos Syndrome (hEDS). In both these disorders, being hypermobile may only be one feature of their condition. People affected by HSD or hEDS may also experience other problems including digestive, respiratory, cardiovascular, or neurological dysfunction. The complexity and severity of problems relating to hypermobility disorders vary widely between people.

What is connective tissue?

Connective tissue consists of proteins called collagen and elastin. It provides structure and support to many tissues within the body including ligaments (connecting bones), tendons (connecting muscles and bones), the skin, internal organs, and blood vessels.

How are Hypermobility Disorders Assessed and Diagnosed?

Health professionals such as GPs and Physiotherapists can assess range of movement in joints and identify those which are hypermobile. If they suspect that a person has a hypermobility-related disorder, they may refer to a Rheumatologist for further clinical examination and assessment. A physical examination will include an assessment for GJH using the Beighton Score. This is a nine-point scale that assesses the thumbs, little fingers, elbows, knees, and lower back for hypermobility. The Rheumatologist will also take a detailed medical and family history and may carry out other investigations to determine if a person fits the diagnostic criteria for a connective tissue disorder.

How can Hypermobility Affect the Performing Arts Professional?

Some research suggests that there is a higher prevalence of hypermobility in some groups of performing artists when compared to the general population. There is also debate as to whether hypermobility offers an advantage or disadvantage to the Performing artist. There is evidence that in some cases, hypermobility can increase the risk of injury, pain, and other musculoskeletal problems. It has been proposed that hypermobility is related to an increased risk of injury due to:-

- Increased workload and fatigue linked to the extra muscular effort required to help stabilise the joints. Joints are normally supported by the ligaments and joint capsule which surround them. In hypermobile people, these structures are looser, so do not offer the same inherent stability. To keep the joints stable, the body uses the muscles to offer secondary support, which requires higher muscular effort.

- Soft tissues (e.g., ligaments and tendons) may be more fragile in those with hypermobility due to structural defects in the connective tissue proteins. This can lead to an increased risk of mechanical failure and impaired healing.

- Hypermobility has been linked to lower muscle strength and exercise capacity, with deconditioning occurring more rapidly if there is a break in training or performing.
- A deficit in proprioception can lead to joints being held in awkward positions or moving too quickly into an unstable range leading to strain on the joints and surrounding soft tissues.

Terminology

Hypermobility has been referred to as hyperlaxity or double-jointedness. The way that hypermobility disorders are diagnosed has evolved, as research has allowed us to expand our knowledge and understanding. The terminology and diagnostic criteria for hypermobility disorders were revised in 2017. For example, the terms Joint Hypermobility Syndrome (JHS) and Benign Joint Hypermobility Syndrome (BJHS) are no longer used.

How can the Hypermobile Performing Arts Professional Reduce their Injury Risk?

Good general health is the foundation for injury prevention in all performing artists but is essential for those with hypermobility disorders. Optimal nutrition, hydration, sleep, and stress management will support tissue health and maximise recovery. Recognising that soft tissues may be more fragile and take longer to heal is important so that the performer can plan sufficient recovery time. Health professionals also agree that education is one of the most important factors in the successful management of those with hypermobility disorders. Having a good understanding of how to apply principles of joint protection, energy conservation and healthy practice/training will empower the performer to manage their musculoskeletal health and support a sustainable career.

Instrumental Musicians

There is evidence that hypermobility is a risk factor for Playing Related Musculoskeletal Disorders (PRMDs) in instrumental musicians, although in some circumstances it may be an advantage for certain joints and instruments. Mechanisms that relate to injuries in any musician can be amplified in those with hypermobility. These factors include the impact of sustained static loading (e.g., holding the instrument); repetitive loading (e.g., the bowing arm); and contact pressure with the instrument (e.g., pressing keys).

Top 5 strategies for hypermobile musicians to help manage injury risk:

1. **Healthy Practice**: Pacing practice schedules is an effective way of managing the overall physical workload. Shorter practice sessions spread over the day rather than one long session is ideal. Regular breaks are also important and should be at least every 20 minutes (or shorter if the repertoire is technically demanding).

2. **Utilise Mental Rehearsal**: Cognitive rehearsal techniques are effective for memorisation and can help reduce the overall physical workload.

3. **Tailored Warm-up and Cool-down**: Appropriate physical preparation is vital for hypermobile musicians. The warm-up should focus on activating key muscle groups to help support playing. The cool-down is an opportunity to release muscle tension and rebalance soft tissues.

4. **Strengthening**: Maximise exercise capacity and improve muscle strength. A tailored exercise programme to progressively strengthen key muscle groups will help support the joints, reduce fatigue, and build resilience.

5. **Modify the Instrument**: Adapting or modifying your instrument can help reduce joint strain and ensure optimal ergonomics. Taping or splinting specific joints can also help with joint protection.

Dancers

The prevalence of GJH in dancers is typically higher than the general population, which is likely to be due to a combination of selection bias (hypermobile people are more likely to become dancers) and the effects of flexibility training from an early age. It has been proposed that the hypermobile dancer may be more susceptible to injury through a pathway of cumulative, repetitive microtrauma and asymmetrical joint surface loading. However, if the dancer receives appropriate support and guidance early, the risk of injury can be significantly reduced, and recent research suggests that hypermobility may even offer certain advantages.

Top 5 strategies for hypermobile dancers to help manage injury risk:

1. **Neuromuscular Training**: an individualised programme that aims to strengthen and stabilise hypermobile joints will be key. Research shows that dancers need to strengthen and acquire control throughout their entire range of movement – including into their hypermobile range.

2. **Safe Stretching**: Hypomobile (i.e., stiff) joints should also undergo training to optimise their range of movement. Targeted stretching with the local joint maintained in a stable position can help address muscle imbalances, but static stretches in extreme positions should be avoided.

3. **Focused Warm-ups**: These should be tailored to focus on specific needs and should include a 'neuromuscular' component to help support joint stability and control. Long static stretches are not usually advised as they can de-stabilise hypermobile joints. However, short static or dynamic stretches can be useful to restore range in joints that may be stiff through injury or imbalance.

4. **Pacing and Planning**: Dance classes, rehearsals, performances, and supplementary training should be scheduled to avoid overload and allow sufficient rest and recovery time. A return to training from time off or injury needs to be appropriately graded.

5. **Psychological Support**: Dancers face unique psychological pressures, and the increased challenge of hypermobility can add to this mental load. Reaching out for support and using preventative interventions such as positive self-talk and breath-work can be helpful.

Neuromuscular Training

Neuromuscular Training (NT) is a programme of exercises combining strengthening with skill specific components to help enhance performance and reduce injury. The aim is to improve 'neuromuscular control' which relates to the communication between nerves and muscles and their ability to generate appropriate dynamic stability around the joints. A Physiotherapist or Strength & Conditioning Coach with expertise in hypermobility could advise you on this type of training.

Professional Voice Users

The vocal apparatus is a suspensory musculoskeletal structure containing joints, ligaments, and other soft tissues, so if these structures are hypermobile it could lead to vocal problems. There is limited research in this area, but there are several mechanisms related to hypermobility that are thought to have an impact on the voice both directly and indirectly.

Firstly, the muscles which support and enable the larynx to function can be weak leading to problems with stability and control of the voice. Secondly, the coordination and mobility of the vocal folds can also be affected. In addition, excessive movement of the hyoid bone or the small joints which are essential to the movement of the vocal folds can lead to dysfunction. (e.g. poor closure of the vocal folds).

Voice problems reported include vocal fatigue; problems with breath support; reduced pitch range; breathiness or hoarseness; and unstable phonation. A common diagnosis made by a multi-disciplinary voice team is that of ‘Muscle Tension Dysphonia.’

Multi-systemic problems relating to the gastrointestinal, respiratory, or neurological systems can have an indirect effect on the voice. For example, respiratory muscle weakness, gastrointestinal disorders and swallowing problems are common in those with hypermobility disorders.

Top 5 strategies for voice users with hypermobility to support their vocal health:-

1. **Vocal Hygiene**: Ensure you carry out an appropriate vocal warm-up, regular steam inhalation and/or sinus rinsing and are optimally hydrated. Take care not to overload the voice and plan sufficient vocal rest in between practice, rehearsals, or performances.

2. **Speech and Language Therapy**: Speech & Language therapists are health professionals who specialise in helping people with voice problems. They will thoroughly assess your voice and offer advice and tailored rehabilitation exercises.

3. **Reflux Management**: Reflux is more common in those with hypermobility disorders due to connective tissue dysfunction in the gastrointestinal system. Lifestyle changes such as leaving 3-4 hours after eating before you exercise or sleep, can be helpful. However, you should seek advice from your GP early if you suspect that reflux is a problem, as referral to a specialist may be advised.

4. **Relaxation and Mindfulness**: There is a recognised link between hypermobility and anxiety. Tools such as breathing exercises, mindful movement practices (e.g., Pilates, Tai Chi) and meditation under the supervision of a suitably qualified professional can help manage anxiety as well as reduce stress-related muscle tension.

5. **Physiotherapy**: A rehabilitation programme to build general strength and endurance; improve proprioception; optimise core muscle function; and improve flexibility in areas which are tight has been found to be effective. This aims to support posture, optimise breath support, increase resilience, and help prevent muscle imbalances in the neck and shoulder girdle.

Getting Help

Hypermobile performers must seek help early if they experience problems so that preventative measures can be put in place quickly. Choosing a health care professional who has expertise in hypermobility is also advised to ensure you receive appropriate support. A physiotherapist who specialises in hypermobility will be able to provide a strengthening and rehabilitation exercise programme tailored to your needs. Check the BAPAM Directory or call the helpline if you would like help finding a suitable practitioner.

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Where Can I Get Further Information and Support?

Free BAPAM Clinics for those in the performing arts with work/study-related health concerns including hypermobility: bapam.org.uk/performing-arts-medicine-clinics

The Hypermobility Syndromes Association support hypermobile people with online support groups, events, information, and advice: hypermobility.org

The Ehlers-Danlos Syndrome UK support group is a charity that aims to support and advise people with EDS, including a free helpline: ehlers-danlos.org

The Zebra Club is a safe online exercise programme for people with hypermobility developed by Movement specialist and hypermobility expert, Jeannie Di Bon: jeanniedibon.hypermobility.club/pages/zebra-club-sales-page

BAPAM Vocal Health Referral Recommendations (and more): bapam.org.uk/health-resources

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