Quick Guide:
The Power of Pilates and Strength Training for Joint Hypermobility Syndrome

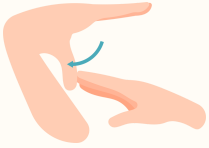
By Jennifer Paa, MPT,CPT

What is the difference between Generalized Hypermobility and Hypermobility Syndrome (HSD)/ h-EDS?

Mobility of a joint refers the amount of motion available at a specific joint. Some joints are inherently more mobile than others, based on the location and joint purpose.
Being flexible does not mean a person is hypermobile. Flexibility is more about how much range of motion a muscle has across a joint. Often, those with hypermobility can have very tight muscles. This is a protective mechanism of the nervous system, whereby the brain does not feel "safe" enough to allow the motion to occur. This is common in hamstrings in particular or in the trunk muscles. The muscles make efforts to stabilize the joint and protect the vulnerable area.

Hypermobility is excessive motion at a joint and can be in 1 or 2 specific areas without any other issues in the body, making it a generally benign issue without presenting any other problems.
Some people tend to just be overall more mobile than others without having any specific limitations in function.

Joint hypermobility can range from asymptomatic joint hypermobility in 1 or 2 areas to generalized hypermobility throughout the body with systemic involvement.
There is a spectrum of presentation and every person is different!



Hypermobility Syndrome HSD/hEDS

A hypermobility syndrome can be multi-systemic and cause a host of issues in multiple areas of the body.

- Multi-joint instability
- Poor motor control
- Chronic pain
- Depression/isolation
- GI (IBS, reflux)
- Genito-urinary issues
- Periodontal disease
- Incoordination
- POTS or dysautonomia (33-50%)

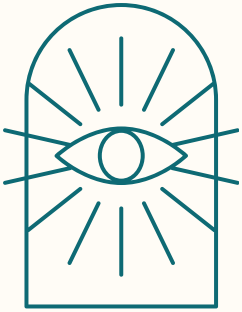
Ehlers Danlos is a group of genetic disorders that affect the collagen in the connective tissues of the body, primarily the joints, skin and blood vessels. Each type of EDS has its own set of features. There is a spectrum of EDS and symptoms are highly variable among different types. Diagnosis is made using a checklist of symptoms, family history, and with the help of an experienced medical professional. Physical therapy (PT) can provide skilled monitoring of exercises, manual therapy when needed, improved pain control, and self care strategies.
BUT, usually insurance dictates how much therapy one needs, OR you are not sure your PT understands the implications of your condition.

THAT CAN BE FRUSTRATING.

Pilates 101

Pilates, created by Joseph Pilates in the early 20th century, is a gentle exercise technique aimed to promote overall body wellness. It encompasses joint flexibility, core strength, balance, and body awareness through precise movements and breathing exercises. Joseph Pilates designed unique equipment like the Reformer, Cadillac, Tower, Barrel, and Wunda chair to enhance the practice. Originally, Pilates appealed to dancers and affluent individuals from a historical perspective. However, that was not his initial intention and it was developed through the rehabilitation of injured soldiers in World War I.

Breathing: the beginning of life, learn to breathe deeply to bring oxygen to muscles and support the core
Centering: the source of movement in the body (“the core”)
Control: safe, properly paced movement is preferred
Precison: quality movement with intention
Flow: incorporate the whole body with continuous movement
Concentration: mental focus to connect mind and body



Pilates and Hypermobility

For individuals with Hypermobility, Pilates can be particularly beneficial due to its emphasis on control, strength and stability.
For those with co-morbidities such as POTS or other symptoms (fatigue, joint pain), Pilates can offer modifications for these obstacles. With or without the equipment (Reformer, Tower), much of the work is done close to the ground.

Pilates can offer:

- Exceptional core and pelvic stability
- Joint stability (shoulders, hips, spine)
- Body awareness, which is often lacking with an unstable joint.
- Neuromuscular control
- Balance
- Controlled flexibility throughout the range of motion
- Energy boost from coordination of mind and body and a positive movement experience!

Pilates can be used for rehabilitation or can be advanced to dynamic patterns of movement. You could literally do Pilates for a lifetime!

Pilates is a versatile exercise system designed to improve flexibility, strength, and body awareness. The “key” Pilates exercises, while great for reducing stiffness and overall body movement, did not really consider the specific needs of certain pathologies. Joseph Pilates was ahead of his time, certainly but the knowledge of hypermobility syndromes was non-existent!
Some key Pilates exercises include the "Hundred," which warms up the body and strengthens the core with a rhythmic pumping of the arms while maintaining a “curled up” position.

The Pilates "Hundred" is easily modified for pain and/or strain:

- leaving the neck down on the mat
- bending the knees or keeping the legs pointing up to the ceiling
- slowing the pace of the arms
- doing less at one time (break into 3 x 30 or 5 x 20)

In this picture, the woman can rest her head down and then take a variation that accomplishes the same goal while respecting her body’s limitations.

"Single Leg Circles" target the hip flexors and core stability by drawing circles in the air with one leg while the other leg remains extended on the mat. This may be difficult for the person with pain due to hypermobility for reasons related to hip instability or SIJ instability.
In the picture below, the strap or band can be added for support.

The "Swan" focuses on back extension and strength, performed by lifting the chest and shoulders off the mat while lying prone. The hypermobile individual may need extra cues and attention to avoid hyperextension as they may feel less connection of the ribcage to the pelvis. The unstable spine may find this exercise painful in the low back or they may not feel it at all due to the excessive range of motion in lower spine.

It's not that these exercises are BAD or DANGEROUS! They just require special attention if the person lacks body awareness, core control or has pain.

In fact, when done with competence they can become very beneficial for a balanced and strong, stable body.

But...
Is Pilates enough?

IT DEPENDS ON YOUR GOALS:

If your goal is:

- to begin exercising
- get generally stronger
- improve joint stability
- improve muscular endurance
- prevent injury and recovery
- feel better overall, then...

ABSOLUTELY!!

HOWEVER....

If your goals include muscle hypertrophy, body re-composition (fat loss) or weight loss, then probably not! Depending on the Pilates class structure and type, you may not stimulate enough load to improve bone density or even get your HR up.

In order to gain muscle, you need to bring a muscle to "near failure" in less than 30 repetitions. Most Pilates moves are not done for that long and therefore do not load the muscles to this degree.

Often, Pilates group sessions may target specific body parts (the "booty" and the "abs") likely because that is what draws a crowd and speaks to trends in the fitness industry. But, it is possible to over-train glutes and under-train other important muscle groups, especially if you have specific needs due to hypermobility. A well-structured program will ensure you build a well balanced body.

But IF you love Pilates. then DO IT!

The best exercise for your body is the one you will do consistently.

Lifting "Heavy" Things!

Strengthening is crucial to supporting joints that lack stability. It is not possible to strengthen a ligament. Muscles provide the added support needed to stabilize the joint, no matter the size or type of joint.
Using progressive overload with weights, resistance bands or even body weight is what is needed to support hypermobile joints including hips, knees, shoulders and ankles.
"Heavy" is relative to your body as well as which specific body part you are targeting! It also depends on the body position in which the exercise is being performed.
So **NO** you don't have to squat or overhead press to get better at these activities.
You need to develop tissue resilience and begin to build up the tolerance for being upright, combining muscle groups, and THEN adding on.

This may take a really long time if you are dealing with symptomatic hypermobility syndrome because your symptoms fluctuate depending on:

the weather
your diet
your over/under activity
your blood pressure
your mood
your hydration
EVERYTHING!

Weight training for hypermobility syndromes

There are things to keep in mind when beginning a resistance training program. The following are some ideas for making your workout safer and more effective in the long term.
REMEMBER: Strength is your life's work!

`1. Prioritize stability: Limit ROM if necessary and focus on form over finding the end of the range (deep squat)

2. Weight machines may be ideal to provide a fixed arc of movement

3. Reduce the load. Body weight can often be enough (side-lying leg lifts)

4. Use a different body position (side-lying arm exercises)

5. Work one muscle group at a time to reduce overall stress to Central Nervous System

6 Respect the feedback your body gives you. You may feel fine during the exercise but "crash" later. This can be typical but not something to keep pushing through.

Optimizing your health

- Balance and proprioception exercises can be very beneficial to challenge small stabilizing muscle around the joint
  THINK: single leg work, balance pads closing the eyes to reduce input from visual world

- Functional strengthening is needed as well for tasks of everyday life.
  THINK: lifting, hinging, squatting, pushing and pulling

- Cardiovascular stimulus is needed to improve overall heart health and metabolism
  THINK: walking, dancing, hiking, biking

BUT you still need a plan.
You can't "muscle" through and expect to just deal with the consequences.

Pilates can be a part of whole body health and is highly effective for preserving joint health, energizing the body, and improving body awareness.

SYNERGY!
PILATES AND STRENGTH

Above is an example of an ideal framework for structuring your weekly workouts. Walking or other light activity may be added in throughout the week, if able. Of course, this may take time depending on your beginning level of fitness. For those with other symptoms, fatigue, postural intolerance, and active pain, this may take months to achieve.

START THE PROCESS.

Pilates, combined with strength training, forms a robust fitness regimen that promotes optimal physical health. The synergy between Pilates and strength exercises enhances functional fitness, ensuring better posture, balance, and stability.
Furthermore, this combination can help prevent injuries by promoting muscle balance and joint health. For those seeking a comprehensive approach to fitness, blending Pilates with strength training offers a holistic path to achieving and maintaining optimal physical well-being

The **5 Day Hyper/Strong Core Program** is free to you!
Begin to connect to the deep core muscles that provide you with an internal sense of stability.
Each video is done as a stand alone routine. Beginners can repeat the first video and even spread the routines out over any length of time. If you have experience, you can use the videos to come back to after a season of inactivity or injury.

Get a plan.
Feel supported

Jennifer Paa, MPT, CPI
@jpaalates

If you're concerned about having a particular medical condition, it's essential to seek advice from a qualified healthcare professional. Self-diagnosis can often lead to unnecessary anxiety or incorrect conclusions. A healthcare provider can offer a thorough evaluation, which may include discussing your symptoms, conducting a physical examination, and possibly ordering diagnostic tests. Remember, early detection and professional guidance are crucial for effective treatment and management of most health issues. If you're experiencing symptoms or have concerns, don't hesitate to reach out to a medical professional for a proper assessment.