**Ehler’s-Danos Syndrome (EDS)**

The hypermobile type of Ehlers–Danlos syndrome (hEDS) is likely the most common hereditary disorder of connective tissue. It is a heritable connective tissue disorder (HCTD)

hEDS, for the most part, is inherited as an autosomal dominant disorder of connective tissue but other patterns of inheritance can be seen in some families.

**SYMPTOMS:**

* Joint hypermobility (measured by Beighton scoring system)
* Neuropathic pain
* Chronic joint pain
* Hyperextensible and fragile skin
* Fatigue and especially chronic, debilitating fatigue is common in hEDS. (Can be mental and physical—Fatigue decreases muscle control and coordination)

**It can affect all age groups. It generally affects females over males.**

**SOURCES:**

<https://onlinelibrary.wiley.com/doi/full/10.1002/ajmg.c.31538>

<https://onlinelibrary.wiley.com/doi/full/10.1002/ajmg.c.31552>

**Joint Hypermobility:**

**Back:**

1. Seated Cable Rows
2. Lat Pulldowns with Resistance Bands
3. Dumbbell Rows on an Incline Bench
4. Superman Exercise
5. Bird Dog Exercise
6. Stability Ball Back Extensions
7. Face Pulls with Resistance Bands
8. Prone Y Raises
9. TRX Rows

**Biceps:**

1. Bicep Curls with Resistance Bands
2. Hammer Curls with Light Dumbbells
3. Concentration Curls
4. Isometric Bicep Holds
5. Reverse Curls with Resistance Bands
6. Preacher Curls with Light Dumbbells
7. Resistance Band Hammer Curls
8. Zottman Curls
9. Isometric Chin-Up Holds

**Triceps:**

1. Tricep Kickbacks with Light Dumbbells
2. Overhead Tricep Extensions with Resistance Bands
3. Tricep Dips (using a stable surface)
4. Skull Crushers with Light Dumbbells
5. Close Grip Push-Ups
6. Resistance Band Tricep Pushdowns
7. Tricep Bench Dips
8. Diamond Push-Ups
9. Tricep Rope Pushdowns

**Forearms:**

1. Wrist Curls with Light Dumbbells
2. Reverse Wrist Curls with Light Dumbbells
3. Farmer's Walks with Light Dumbbells or Kettlebells
4. Forearm Plank (hold plank position on forearms)
5. Hand Gripper Exercises
6. Pronation and Supination Exercises with Light Dumbbells
7. Wrist Flexor Stretch (gentle stretch of the forearm flexor muscles)
8. Wrist Extensor Stretch (gentle stretch of the forearm extensor muscles)
9. Forearm Pronation and Supination Stretch (gentle rotation of the forearm to stretch the muscles)

**Quadriceps:**

1. Bodyweight Squats
2. Step-Ups onto a Low Platform
3. Wall Sit (hold a squat position with back against the wall)
4. Leg Extensions with Light Weights or Resistance Bands
5. Walking Lunges
6. Leg Press Machine (using light resistance)
7. Seated Leg Extensions with Resistance Bands
8. Isometric Quad Contractions (contracting and holding the quad muscles without movement)
9. Mini-Band Side Steps (with a resistance band around the thighs, step side to side)

**Hamstrings:**

1. Stability Ball Hamstring Curls
2. Romanian Deadlifts with Light Dumbbells
3. Glute Bridge with Leg Curl (lying on back, lift hips and perform hamstring curl with one leg)
4. Swiss Ball Leg Curls
5. Kettlebell Deadlifts
6. Single-Leg Romanian Deadlifts with Light Dumbbells
7. Standing Hamstring Stretch (gentle stretch of the hamstrings while standing)
8. Seated Leg Curls with Light Weights
9. Downward-Facing Dog Stretch (yoga pose that stretches the hamstrings and calves)

**Calves:**

1. Seated Calf Raises
2. Calf Raises on a Step with Light Dumbbells
3. Calf Raises with Resistance Bands
4. Tibialis Raises (lifting the toes towards the shin)
5. Calf Stretch (leaning against a wall or using a calf stretcher)
6. Calf Press on Leg Press Machine (using light resistance)
7. Donkey Calf Raises (leaning forward on a stable surface while lifting heels)
8. Calf Flex with a Resistance Band (pointing and flexing the foot against resistance)
9. Standing Calf Stretch (gentle stretch of the calf muscles while standing)

**Core/Abs:**

1. Plank
2. Dead Bug (lying on back, alternate extending opposite arm and leg)
3. Bird Dog (on all fours, extend opposite arm and leg while keeping the spine stable)
4. Bicycle Crunches
5. Russian Twists with Light Weight or Medicine Ball
6. Side Plank
7. Superman (lying face down, lift chest and legs off the ground simultaneously)
8. Stability Ball Rollouts (kneeling on a stability ball and rolling out)
9. Hollow Body Hold (lying on back, lift shoulders and legs off the ground while maintaining a hollow position)

**Chest:**

1. Chest Press Machine (using light resistance)
2. Push-Ups on Knees
3. Dumbbell Chest Flyes on Stability Ball
4. Resistance Band Chest Press
5. Pec Deck Machine (using light resistance)
6. Cable Chest Flyes (using a cable machine with light resistance)
7. Medicine Ball Chest Pass (lying on back, pass a medicine ball to a partner)
8. Standing Chest Stretch (gentle stretch of the chest muscles while standing)
9. Standing Cable Chest Press (using light resistance)

**Chronic Pain:**

**Back:**

1. Seated Cable Rows with Light Resistance
2. Lat Pulldowns with Bands
3. Chest-Supported Dumbbell Rows
4. Machine-Assisted Pull-Ups
5. Face Pulls with Resistance Bands
6. Prone Back Extensions on a Hyperextension Bench
7. Quadruped Rows (using light dumbbells)
8. Straight Arm Pulldowns with Resistance Bands
9. Cable Face Pulls

**Biceps:**

1. Bicep Curls with Light Dumbbells
2. Hammer Curls with Resistance Bands
3. Cable Bicep Curls with Light Resistance
4. Incline Dumbbell Curls
5. Preacher Curls on a Machine with Light Resistance
6. Concentration Curls with Light Dumbbells
7. EZ Bar Curls with Light Weight
8. Reverse Curls with Resistance Bands
9. Is**ometric Bicep Holds (holding a static bicep curl position)**

**Triceps:**

1. Tricep Pushdowns with Light Resistance
2. Overhead Tricep Extensions with Light Dumbbells
3. Tricep Kickbacks with Resistance Bands
4. Cable Tricep Extensions with Light Weight
5. Dumbbell Skull Crushers with Light Weight
6. Bench Dips with Feet Elevated
7. Close Grip Bench Press with Light Weight
8. Tricep Rope Pushdowns with Light Resistance
9. Diamond Push-Ups on Knees

**Forearms:**

1. Wrist Curls with Light Dumbbells
2. Reverse Wrist Curls with Light Dumbbells
3. Farmer's Walks with Light Dumbbells or Kettlebells
4. Forearm Plank (hold plank position on forearms)
5. Hand Gripper Exercises
6. Pronation and Supination Exercises with Light Dumbbells
7. Wrist Flexor Stretch (gentle stretch of the forearm flexor muscles)
8. Wrist Extensor Stretch (gentle stretch of the forearm extensor muscles)
9. Forearm Pronation and Supination Stretch (gentle rotation of the forearm to stretch the muscles)

**Quadriceps:**

1. Leg Press Machine with Light Resistance
2. Bodyweight Squats
3. Leg Extensions with Light Weights
4. Wall Sit (hold a squat position against the wall)
5. Step-Ups onto a Low Platform
6. Static Lunges with Light Dumbbells
7. Seated Leg Press Machine with Light Resistance
8. Mini-Band Squats (with a resistance band around thighs)
9. Terminal Knee Extensions with Resistance Bands

**Hamstrings:**

1. Hamstring Curls on a Machine with Light Resistance
2. Romanian Deadlifts with Light Dumbbells
3. Swiss Ball Hamstring Curls
4. Glute Bridge with Light Dumbbells
5. Kettlebell Deadlifts with Light Weight
6. Stability Ball Leg Curls
7. Seated Leg Curls with Light Weights
8. Single-Leg Romanian Deadlifts with Bodyweight
9. Prone Leg Curls with Resistance Bands

**Calves:**

1. Seated Calf Raises with Light Weights
2. Calf Raises on a Step with Light Dumbbells
3. Calf Raises with Resistance Bands
4. Standing Calf Raises with Light Dumbbells
5. Tibialis Raises (lifting the toes towards the shin)
6. Calf Stretch (leaning against a wall or using a calf stretcher)
7. Donkey Calf Raises with Light Weight
8. Calf Flex with a Resistance Band (pointing and flexing the foot against resistance)
9. Seated Calf Stretch

**Core/Abs:**

1. Plank (on forearms or extended arms)
2. Dead Bug (alternating arm and leg extensions while lying on back)
3. Bird Dog (opposite arm and leg extensions while on all fours)
4. Bicycle Crunches
5. Russian Twists with Light Weight or Medicine Ball
6. Side Plank (on forearm or extended arm)
7. Superman (lying face down, lifting chest and legs)
8. Stability Ball Rollouts (kneeling on a stability ball and rolling out)
9. Hollow Body Hold (lying on back, lifting shoulders and legs off the ground)

**Chest:**

1. Chest Press Machine with Light Resistance
2. Push-Ups on Knees
3. Dumbbell Chest Flyes with Light Weights
4. Cable Chest Flyes with Light Resistance
5. Incline Bench Press with Light Weight
6. Machine Chest Press with Light Resistance
7. Pec Deck Machine with Light Resistance
8. Resistance Band Chest Press
9. Wall Push-Ups