Approaching Fitness with Hypermobility 2.0

Important: This should **not** be considered medical advice. All information and resources are based on the opinions of the author. Readers should consult their doctor or health practitioner before making any health changes. This is not a comprehensive fitness resource, it reflects personal experience and won't be appropriate for everyone.

Purpose of this document

- 1. Provide resources that may help you develop an exercise program yourself. This video explains my approach to program design.
- 2. Help you modify a free general strength program like the r/bodyweightfitness routine.
- 3. Direct you towards free or paid programs that might be suited to your situation. This is the easiest, so let's get it out of the way.

PT/Rehab Programs

The Muldowney Protocol is a PT routine developed specifically for EDS. I made a video with some more info.

<u>Coreexercisesolutions.com</u> has rehab, posture, and pelvic floor programs and some free content

Glutescorepelvicfloor.com has some interesting rehab/fitness programs with an educational angle

Pelvicexercises.com has some strengthening routines with a pelvic floor emphasis

Fitthriveworkouts.com has some intriguing programs

CHoP exercise program for dysautonomia.

General Strength/Fitness Programs. Although not appropriate for many, these are programs or strength coaches I've come across with some indication of accessibility or adaptability. For example, they may offer consultations and personalized program design. Megsquats has an entertaining and informative YouTube channel, and programs such as lifting/gym-based Stronger by the Day, and a 12 week program for achieving your first pull-up. She also just released a Before the Barbell program!

Marisa Inda has an excellent exercise library on her channel. She also has a book and training programs.

Kyfitness.ca offers consultations and custom training plans

drsarasolomon.com has a strength program that seems solid

Ironbodybyartemis.com has online personal training

Erica Suter is a strength coach mostly focused on soccer, but she offers a life athlete fitness program. Her youtube channel is mostly demos with no commentary.

Allisontenneyfitness.com article on time under tension (she also has kettlebell programs)

Daniel Vadnal has good YouTube channel, and a beginning bodyweight program

GMB has some beginner programs

Barbell Medicine has <u>great YouTube and podcast content</u>, and offers <u>a beginner template</u>, a <u>low back pain template</u>, and <u>coaching services</u>. I'm currently doing their free Bridge 1.0 program, and pencilling in the Powerbuilding program next.

Update Notes: Most of the content is unchanged, although I've added and removed a few things. The table of contents is now clickable, and I've drawn attention to >high quality links< that I found valuable. This often means I learned something from the content, not that I recommend the exercises specifically.

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Also check out Fortifying Connective Tissue from the M&R doc.

Other Resources From the Author

Program design for hypermobility and POTS (video)

Pragmatic Approach to Hypermobility and Dysautonomia (video)

Methods & Resources 2.0 (Strategies and info relevant to Hypermobility, hEDS, HSD,

Dysautonomia and POTS) (document)

Peptide Primer: An Introduction To Healing Peptides (document)

Intro

Once I accepted that my declining health was due to hypermobility issues, I began looking for ways to fortify my body. I had always been pretty active, with physically demanding jobs and hobbies, but it only seemed to make things worse. I was often in PT, addressing whatever joint was most pressing, but it never seemed to prevent injuries. After the classic downward spiral of pain and disrupted sleep brought me to a crisis point, I accepted that "staying active" wasn't enough. That I would need to make space in my life for a structured approach, based not on my preferences, but the results I was seeking. I also realized that fitness isn't intuitive, and I didn't know where to begin. So rather than find my own path, I sought out established routes to fitness, accommodating my body when necessary. I've had success, and it's a relief to be getting better instead of worse. But I had setbacks too. I found the good information was buried under mountains of mediocre and bad advice, and as a novice it can be difficult to tell the difference. I don't know what's possible for others, but I hope these concepts and resources will help you find a route forward that is appropriate for yourself.

Making change

There is one concept that was particularly helpful in making decisions about my training. It's called Specific Adaptation to Imposed Demand. SAID. All biological systems adapt in a way that is specific to the particular demand imposed. This applies to single cells, tissue remodeling, even language learning. When skin cells are irradiated by UV rays, they

produce more melanin for protection. When your muscles are required to do difficult things, they get better at doing difficult things. When you practice speaking italian, you get better at speaking italian. It'd be weird if difficult physical exercise made you better at italian.

What's this mean for fitness? Well, it makes things simpler. If you want to be strong, you have to challenge your strength. If you want better balance, you practice balance. Want more CO2 tolerance and breathe control? Practice holding and regulating your breath. As your body adapts, it requires a different or more intense stimulus to produce further adaptation. If someone offers you strength without practicing strength, or cardiovascular stamina without effort, they're lying. The same way someone is lying if they suggest you can learn italian without progressing through increasingly advanced lessons.

SAID is my litmus test for any exercise or activity, and the process by which I change my body.

- 1. Apply focus and effort to safely challenge my body at a sufficient intensity to stimulate adaptation in a chosen area.
- 2. Create the right conditions for the adaptations to occur.
- 3. Wait until my body is sufficiently recovered and adaptation response is subdued.
- 4. Repeat, hopefully with refined execution or more intensity in some way.

This one process describes fitness and learning a language. A student can show up for class without learning anything by not putting in effort, or trying to learn things in the wrong order. Or perhaps they simply stayed up all night and their body is unable to adapt. Whenever I'm in doubt, I remember that I'm learning the language of strength. It has a vocabulary and grammar, but also pronunciation. It's not simply something you do, it's something you do well.

I share this because you may feel out of place, or that fitness is inaccessible to you. But imagine two students in a class. A teenager attending a mandatory language course, versus a grandmother auditing the same course. Let's call her Hazel. Neural plasticity suggests the teenager has a better chance of success. But Hazel's granddaughter is engaged to a sweet italian fellow and she wants to chat with his family at the wedding. Is Hazel really at a disadvantage? She won't begrudge putting in effort, and she'll practice frequently. She attends lectures of her own volition. She asks questions, and reviews her mistakes. She desperately wants to learn. Of course she'll do better. At the end of the semester Hazel has learned the key phrases and vocabulary she wanted. And she keeps working. She finds free courses online, and watches youtube videos. She practices vocabulary, and refines her pronunciation. The wedding arrives, and Hazel delivers her whole toast in italian. She has a great time meeting her new family, and promises to visit them next year. Heck, maybe she'll just move there and speak italian all the time.

I don't have much of a pep talk for you, but just remember Hazel. You are fighting for your quality of life, and functional use of your body. In theory, you may be at a disadvantage. But you have a compelling reason to train, which is the best asset. Whatever route forward you feel is appropriate, it will ultimately come down to long term consistency. Plus, fitness and health require sacrifices outside of workouts. Going to bed, eating nutritious food, avoiding

stress and injury. These are the areas most people can't be bothered to improve. They think going through the motions entitles them to results. They bang out reps without focus, they find ways to cheat on execution. They make it easier instead of harder. Be like Hazel, who doesn't begrudge letting her goal saturate her life, and you may be surprised by how well your body responds.

Section 1- The Basics

Weekly Structure

When you work hard it stimulates increased Muscle Protein Synthesis and elicits a beneficial hormone response. The increased MPS, and other aspects of recovery last about 48hrs. So it's important not to exert the same muscle groups again during this period, as it may disrupt the adaptation process. Eventually you might bend or break this rule, but your body needs time to repair and then adapt to the workouts. Here are some options depending on how many workouts per week you'd like to do. Full-body 3x/wk may be most appropriate for beginners. It has good frequency, no exercise restrictions, and it has rest days after every workout. I'd suggest beginners steer clear of 4,5, or 6 workouts per week, but provided it's structured appropriately it should be fine. My suggestion would be to choose a specific schedule and stick to it. For example, MWF in the morning worked great for me. You may need to compromise on the length or intensity of individual workouts in order to maintain consistency. The science suggests hitting each muscle group 2x/wk is superior to 1x/wk, but is less clear on the benefits of 3x/wk. Perhaps chronic illness warrants more rest days, but I can't rely on delivering high intensity or volume in individual workouts, so I prefer hitting each muscle group 3x/wk at a sustainable level.

Sessions per week	1	2	3	4	4(alt)	5	6
Monday	Rest	Rest	Full-body	Upper	Upper	Upper	Upper
Tuesday	Rest	Rest	Rest	Lower	Rest	Lower	Lower
Wednesday	Rest	Full-body	Full-body	Rest	Lower	Upper	Upper
Thursday	Rest	Rest	Rest	Full-body	Rest	Lower	Lower
Friday	Rest	Rest	Full-body	Rest	Upper	Rest	Upper
Saturday	Full-body	Full-body	Rest	Full-body	Lower	Full-body	Lower
Sunday	Rest	Rest	Rest	Rest	Rest	Rest	Rest

Workout Structure

A workout structure gives you a framework for your exercises. You can add or remove exercises without the whole thing falling apart. I started with the following structure. The exercises are similar to the Recommended Routine from r/bodyweight fitness, and Steven

Low's Overcoming Gravity (a great book). Weight lifting programs will also often have >2 upper pushing movements, two pulling, two legs, plus lighter corrective exercises.

Warmup

10-20 minutes warming up various areas and practicing good movement patterns

Skill work

This is the time to practice skills that require balance and precision. I started with >6 isometric bodyline drills. < These challenge balance and strength, while improving joint control. I sometimes do my core work in this slot. Something like balance practice would fit well here (maybe start with chair support). If an exercise fatigues crucial stabilizers, it should go in isolation. When in doubt, choose isolation. I eventually dropped the skill work slot and shifted my focus to strength work, with corrective and accessory exercises afterwards. Early on, especially in injury prone individuals, the skill work slot provides a time to do priority exercises while fresh.

Strength work

This is the time for compound movements hitting major muscle groups. Although they offer great payoff, you may need to delay the strength progressions until you've bolstered vulnerable areas with isolation work.

Specifically, I have 6 main progressions. I will find alternatives for individual exercises if necessary, but avoid skipping any categories.

2 upper body pull exercises

Row Progression (horizontal pull)

Pull-up Progression (vertical pull)

2 upper body push exercises

Push-up Progression (horizontal push)

Dip Progression (vertical push)

2 leg exercises

Squat Progression (quad dominant)

Second leg exercise such as glute bridge (not quad dominant)

Isolation

This is the time for targeting specific muscles that aren't hit by the compound movements, or benefit from additional attention. If you have any PT or miscellaneous exercises, they would likely be appropriate in isolation. You could include mobility and cooldown exercises here too, if they appeal to you. You may have a lot of isolation exercises to fit in this slot, which is fine. If you're struggling to include all the isolation exercises you'd like, consider making an A and B list then repeat the A list twice as often. Put your highest priorities on both lists, so you do them 3x/wk. Put your secondary priorities in the A list, those will be done 2x/wk. Put your lowest priorities in list B, to hit them 1x/wk.

Day	Monday	Wednesday	Friday
Isolation exercises	List A	List B	List A

Priorities Over Time

Here is (roughly) how my training changed over time.

I trained in this way	Because of these reasons
Picked days and times to train, but literally just showed up for workouts and didn't do anything substantial. Maybe tried some different warmups, mostly laid on a yoga mat and watched YouTube fitness videos. I opted for Monday, Wednesday, and Friday mornings before lunch.	The most critical aspects of training are consistency and sustainability. I intentionally made it so easy that I had no excuse. All I had to do was go downstairs and lay out a mat. This allowed me to develop consistency before ramping up intensity. This helped change my mindset from "I'm a broken down pile of shit" to "I'm someone who shows up for workouts". Although it didn't do much for me physically, it eased the dread and negative thoughts.
I primarily focused on autoregulating to keep showing up for workouts. Even if I felt terrible I physically showed up, but allowed myself to cut back, skip exercises, and end the workout at any time.	Maintaining consistency is still the main priority, so end each workout before it jeopardizes the next is crucial.
I applied most of my effort toward corrective/isolation exercises to bolster vulnerable areas. Grip training, scapular strength, medial glute, and core were my priorities, but I sampled a lot of different exercises and varied them between sessions. My only mainstay were the bodyline drills, which I adapted to accommodate my wrists, and did 3x/wk until I hit 60s on all of them. I began practicing some strength progressions (incline pushups, incline rows, box squats) but I treated them as skills. I watched videos, recorded myself, and fine	Beginners respond well to new stimuli, so I was likely to benefit from corrective exercises even if I only did them 1x/wk. Therefore, I opted to sample a variety of exercises. With the strength progressions, it's more important to focus on a few exercises and dial in the execution. Once the intensity increases, I didn't want to be trying random variations
tuned my technique before ramping up intensity.	and figuring out wrist positions.
After bolstering my weak areas (wrists, scapula, core, medial glute) I shifted to a more even balance between the light corrective/isolation exercises and more challenging strength progressions. In addition to incline pushups, incline rows, and squats, I also added the dip progression, pullup progression, and glute bridge. Obviously I had to select appropriate regressions of the exercises (like resistance band pull-downs instead of pull-ups). I also did overhead pressing with a plate, and sampled more variations of	By this time I was using peptides to aid recovery and had acclimated to training. I was confident I could maintain consistency, but still cut back if I wasn't recovered from the last workout. My ability to bounce back from minor injuries allowed me to sample a wider range of exercises and intensity levels.
	Picked days and times to train, but literally just showed up for workouts and didn't do anything substantial. Maybe tried some different warmups, mostly laid on a yoga mat and watched YouTube fitness videos. I opted for Monday, Wednesday, and Friday mornings before lunch. I primarily focused on autoregulating to keep showing up for workouts. Even if I felt terrible I physically showed up, but allowed myself to cut back, skip exercises, and end the workout at any time. I applied most of my effort toward corrective/isolation exercises to bolster vulnerable areas. Grip training, scapular strength, medial glute, and core were my priorities, but I sampled a lot of different exercises and varied them between sessions. My only mainstay were the bodyline drills, which I adapted to accommodate my wrists, and did 3x/wk until I hit 60s on all of them. I began practicing some strength progressions (incline pushups, incline rows, box squats) but I treated them as skills. I watched videos, recorded myself, and fine tuned my technique before ramping up intensity. After bolstering my weak areas (wrists, scapula, core, medial glute) I shifted to a more even balance between the light corrective/isolation exercises and more challenging strength progressions. In addition to incline pushups, incline rows, and squats, I also added the dip progression, pullup progression, and glute bridge. Obviously I had to select appropriate regressions of the exercises (like resistance band

could sustain for 15+ reps and stayed well short of failure. As time went on I ventured down to 8-12 reps, sometimes lower, and did some heavier eccentric work like pull-up negatives. Most of my strength progressions were bodyweight, but I mixed in some external loading.

I tried to put in some good work on my strength progressions, and cut back on the corrective work if I ran out of steam. I typically began with warmup sets well below my capacity, and then 2-3 challenging sets. These workouts got long (sometimes 2hrs) but my schedule allowed it and most of that time was spent lying on the floor between sets.

Pursuing strength (18mo and beyond)

After spending so much time mostly in the 8-20 rep ranges, I began to mix in higher intensity exercises I could only perform 3-5 reps of. My schedule became less forgiving, and I sampled various schedules and programs. I opted to keep doing my own programing, and settled on training 5x/wk which allows me to get good volume in shorter workouts. I no longer had particularly weak areas needing attention, so I cut back on corrective exercises and focused on compound strength progressions. By this time I had largely switched from bodyweight to barbell exercises. I kept accurate records, varied my volume and intensity in logical ways over time, and pushed myself to failure and beyond when appropriate. Rather than reminding myself to be careful and cut back as needed, I focused on working hard and bringing intensity when able.

At this point I was sleeping well, was largely free from chronic pain, and had great functional use of my body. Although I didn't have acute problems to address, my training continued to fortify body in beneficial ways and I viewed it as a savings account to protect me in the event of future sickness or injury.

My goals were continued strength and hypertrophy gains, so it was necessary to fill in the gaps left by my history of training at higher reps. Therefore, an emphasis on lower reps seemed appropriate.

Training has also continued to benefit me mentally, by developing discipline and consistency. It also gives me a framework to structure my lifestyle, and encourages healthy habits like consistent sleep.

Rest Times/Pacing/Intensity

It's better if you go elsewhere to learn about these topics. Here are some resources:

>Spending extra time on the eccentric portion may be particularly helpful for producing connective tissue adaptation.<

<u>Jeff Cavalier explaining some rep variety.</u> ><u>Ways to grow muscle</u>, <u>Time under tension</u>< <u>Drop sets</u>.

>A sci-fit article on these topics.<

If you'd like to learn more about how close to failure you should go, this conversation touches on these topics. I also enjoyed this conversation with some counter arguments regarding failure and volume.

Here is a >shorter video on the relationship between fatigue, stimulus, and failure. This study is an interesting read, and touches on the value of eccentric tension and the significant time required for connective tissue adaptation, plus the wide variety of collagen types, and the role of Growth Hormone.

Recovery Habits

I put most of the recovery habits in the Methods and Resources document, because they also support general health outside of training. Here is how I approach it.

Avoid stressful or injurious activities

Maintain controlled diaphragm breathing whenever possible, especially in stressful or strenuous activities. This inhibits your fight or flight response and reduces cortisol and adrenaline levels.

Plenty of water

I drink at least a gallon, generally more. I also supplement with a mix of electrolytes. Start drinking early if you struggle to get enough water.

Eat nutritious food with adequate protein

.8-1g of protein per lb of bodyweight should be plenty. Whole foods are more nutrient dense. A slight caloric surplus supports muscle growth, but isn't essential. <u>Protein hierarchy</u>.

Supplement appropriately

Protein is the main priority, perhaps a multivitamin and omega 3s. I like HMB, but the evidence is lacking. I like morning and evening protein shakes.

Encourage you parasympathetic nervous system (rest and recovery)

I lay down, close my eyes, and focus on slow breathing at least 2x/day. Especially after meals. I aim for 15min, but even 5min has a noticeable benefit to digestion. This allows my body to digest food and get some recovery during the day. It's just not the same if you stare at your phone.

Anything and everything to increase and improve sleep.

I use a structured bed time, blue blocking glasses, ear plugs, eye mask, and melatonin.

Priorities

These are some of the areas I've focused on, and roughly the order I approached them. Don't use this as a basis for planning workouts! Many exercises hit multiple muscles, so I pursue a balanced routine and refer back to this list to insure I'm not leaving gaps. Perhaps you'd like to compose a similar list and discuss it with your physical therapist. Although I've mentioned example exercises, it's essential that you choose exercises and intensities that are appropriate for you **in your current state**. Refer to the exercise list for links to videos. I didn't attempt any serious strength progressions until I made progress in all the Phase 1 areas.

Phase 1

	General core strength (Protects spine)
	■ Bodyline drills, (plenty of alternatives such as 6 Pack Promise app)
	TVA (Stabilizes core, supports internal organs, reduces blood pooling in abdominal
	cavity)
	Laying vacuums, standing isometric
	Scapular strength (Protects shoulders, reduces scapular winging and pain, essential
_	for safety during upper body exercises)
	□ Scapular retraction
	·
	☐ Arch/Angel of Death, floor T exercise, reverse plank
	□ Scapular deprepression
	□ Support hold, scap pull down
	☐ Scapular protraction
	☐ Incline scap push ups
	☐ Scapular elevation
	Trap shrug with bands
	Rotator cuff (Important, but vulnerable to injury)
	☐ Band exercise
	Glutes, pelvic stability (Protects lumbar spine, essential for safety during lower body
	exercises)
	☐ Bridge, hip thrust, reverse hyper, leg lift (especially for medial glute)
	Grip training (Protects wrists, may become a barrier to pulling exercises if
_	unaddressed)
	☐ Wrist curls w/ band or weight
	· · · · · · · · · · · · · · · · · · ·
	☐ Gripper squeeze, extensor training
Phase	2
	Anti-rotation core (Protects spine, requires some general core strength to perform
	safely)
	□ Pallof press
	Front, Rear, and Side Delts (Especially side and rear delts. Stabilizes shoulder. Avoid
	exercises that cause crunching and popping. Start with very light resistance.)
	Shoulder press, face pulls, lateral raises
	Row Progression (General back strengthening, supports posture, requires scapular
	control)
	Incline rows, band rows
	Squat Progression (General lower body strengthening, requires pelvic stability)
	■ Box squats
Phase	3
	Push Up Progression (Develops general chest & pushing strength, requires some
	back strength to prevent imbalances)
	☐ Incline push ups, band chest press
	Pull Up Progression (Develops general back strength, also bicep and scapular
_	strength)
	☐ Band pull down, band assisted pull ups
	Second Leg Progression (Develops well-rounded leg strength)
_	
г.	☐ Hip thrust, bridge, hamstring curls, bulgarian split squat
	Dip Progression (Develops chest, triceps, and general pushing strength)
_	□ Support hold, band assisted dip
	Overhead pressing movement (Develops well-rounded pushing strength and unlocks
	inversion exercises like wall planks)

■ Shoulder press, box thruster
Straight-arm scapular strength (Develops well-rounded scapular strength)
Straight-arm pull downs
Calf (Probably safe to do earlier, but not everything can be a high priority)
Calf raises, elevated calf raises
Knee (Knee stability is difficult to train directly, so general leg strength seemed more
effective)
□ TKE
☐ Reverse TKE
TMJ exercises (Could probably be done independently of workouts)
☐ Jaw isometrics
Balance and agility (Improves body control, reduces injuries. I initially thought I'd
approach balance directly, but refining technique on single-leg exercises seemed
effective)
■ Balance progression, speed drills
Neck (Requires core strength, upper back strength, good posture, and explicit
approval from your physical therapist)
□ Band or isometric
Cardiovascular capacity
Swimming, hill walks/sprints, wall plank circuits
Bicep and tricep training (These muscles contribute to shoulder stability and respond
well to additional direct training)
☐ Bicep curls/hammer curls, tricep push downs

Section 2- Exercise Lists

Some of these videos are meant for informational purposes more than as a specific exercise suggestion. It's your responsibility to determine what is safe and appropriate.

Warm-ups There are plenty of options, these examples are from the old Recommended Routine. Replace aggravators, add favorites, aim for 10-20 minutes. <u>Video from (old)</u> Recommended Routine. 10 reps each, or set a timer.

- Shoulder Rolls
- Scapular Shrugs (limit range at both ends)
- Camel Bends (I replaced these with <u>wall slides</u>)
- Straight Arm Overhead Pull Downs
- Straight Arm Chest Flies
- Band Dislocates
- Front Leg Swings
- Side Leg Swings
- Wrist Mobility Drill (<u>GMB alternative</u>, I do this against a wall)

Skill Work: If you'd like to pursue a <u>Balance Progression</u> (start with chair support), skill work would be the appropriate section. <u>Bodyline drills also require balance and precision, so I think they are appropriate here.</u> These are isometric exercises that challenge the core and train good joint control. You simply try to hold good form as long as possible. These can be quite challenging, and train joint stability. If a particular position is too difficult to hold for 10s, find ways to safely lower the intensity. **Connective tissue disorders can cause hypotonia** (low baseline muscle activation). <u>Isometrics may be an effective way to increase tone.</u> If you

achieve 60s on these you may be ready for a new challenge or more advanced progressions. The new RR has the Core Triplet instead.

- Plank (forward) Approaching the forward plank gradually. Safer alternative.
- Left Side Plank Side plank progressions and regressions
- Right Side Plank
- Reverse Plank (<u>alternative</u>) Reverse plank tips and regressions
- Hollow Hold (Or dead bug)
- Arch Raises can be a good intro.

Strength Work

These are compound movements intended to improve general strength and add muscle mass. They could eventually be done at a moderate to high intensities, but must be approached cautiously. You'll have to determine what's appropriate for you. An early emphasis on pulling might help to develop strong posture muscles. You'll inevitably need to find alternative exercises at times. The name of each progression is a link to exercise you can see what muscles they work and identify alternatives.

These videos explaining the (old) Recommended Routine from r/bodyweightfitness cover most of these exercises in a similar structure.

Nick-e demonstration of the old recommended routine. (web archive of the same page in case it gets updated)

> Fantastic explanation of the old RR by Antranik. < FitnessFAQ demonstration of the old RR.

Upper Body Pull

Row Progression

Progression explanations: >Start with incline rows or bands (I don't recommend that grip)<, nick-e.com bodyweight rows tutorial, band rows with Michelle Kenway
Execution, modification & safety: Tom Merrick ring row tips, tips for pull-downs and rows from Alexia Clark, Athlean-x row tips

Alternate exercises: Different equipment and body position options, bedsheets and other options from Antranik, RDP discusses equipment options

Notes: Because you can adjust the difficulty so easily, incline rows are probably the most accessible strength progression. You may need wrist support though. I try not to let my elbows flare out.

Pull Up Progression

Progression explanations: Antranik pull up progression, GMB beginner ring pull ups, part 2, part 3, 1st pull up from Marisa Inda, 1st pull up from megsquats, >Tom Merrick ring progression<, resistance band pull ups, nick-e.com pull up tutorial Execution, modification & safety: >Athlean-X pull up problems<, brachioradialis weakness, pull ups vs chin ups

Alternate exercises: <u>Lat pull downs</u>, <u>straight arm push downs</u>, <u>twisting standing overhead pull</u>

Notes: When approaching pull ups, I used a combination of lat pull downs, band-assisted pull ups, and negatives, but my favorite early exercise was simply simulating the pull up motion with resistance bands anchored overhead. I try not to let my elbows flare out.

Upper Body Push

Push Up Progression

Progression explanations: <u>Antranik progression</u>, ><u>Tom Merrick progression</u><, <u>Barstarzz progression</u>, <u>nick-e.com push up guide</u>

Execution, modification & safety: >Athlean-X Push Up checklist<, Perfect Push Up from Calestenicmovement, 10 mistakes FitnessFAQ, 6 Mistakes Scott Herman, Don't do Chest Flies Athlean-X, Tips for Shoulder Safety During a Push Up from Gina Hoegh, more tweaks from FitnessFAQ (be careful).

Alternate exercises: >Consider beginning with scapular pushing<, adduction work might help if you run into trouble with incline pushups, some resistance band chest exercises, chest press with bands, crossover with bands

Notes: I like to keep my elbows close by my sides to keep the emphasis on the chest and protect my shoulders during push ups.

Dip Progression

Progression explanations: <u>FitnessFAQ unlock the dip</u>, <u>start with support hold (could be band or leg assisted)</u>, <u>band assisted dips</u>, <u>nick-e.com dips tutorial</u>

Execution, modification & safety: <u>Band vs machine assisted dips</u>, <u>perfect dip calisthenicmovement</u>, <u>Athlean-X dip tutorial</u>, <u>Jeff Nippard on dips</u>

Alternate exercises: <u>maybe a decline chest press?</u> <u>Serratus exercises</u>, <u>band tricep push downs</u>, <u>>bench dips</u><. <u>Scapular winging</u>

Notes: I'd suggest finding something to catch you at a safe depth, similar to a box squat. You'll also need to fine tune your hand position and bar angles. Some external rotation may help (such as in bench dip video).

Legs

Squat Progression

Progression explanations: >Start with box squats< with hand support, plenty of heavy lifters keep the box, megsquats squat tutorial, how low to squat, work up to single leg exercises or weighted

Execution, modification & safety: > Athlean-X hip hinge<, playlist of experienced lifters refining technique, squat modifications

Alternate exercises: thruster, step ups, or any compound leg exercise.

Notes: I'd suggest you play it safe on depth, and have something to catch you.

Another leg exercise, perhaps glute dominant

Reverse hyper, glute bridge, hip thrust

75 bodyweight leg exercises, Some more lower body exercises, hamstring exercises Bulgarian split squat, Split Squat/Lunge Progression,

Notes: If your first leg progression is quad dominant, ideally this exercise would involve more glute or hamstring work, <u>you can bring some hamstring involvement to the glute bridge</u>, but be careful.

Isolation Exercises/Other

General/misc

Seated/wheelchair cardio, core, and misc exercises

More seated cardio, yoga, and HIIT workouts

Hep2go.com has a lot of PT exercises

Ohio State University has a lot of PT resources

Thera-band Academy has an exercise library and other resources

Athlean X: >8 best band exercises for massive injury prevention<, commonly

overlooked exercises. More concepts and exercises from Jeff.

Tendon training ideas from the Bioneer

TMJ isometric exercises

Grip Training

Wrist Flexion, Extension, and Rotation Video demo of r/griptraining routine

Athlean-X forearm workout with info about safety and technique, troubleshooting

wrist pain (these won't all be appropriate)

>The importance of extensors<

Finger Extension

Gripper Squeeze

Wrist Curls (2:00) (Wrist curl controversy) (interesting variation)

More wrist curls: flexion, extension, supination

Arms (bicep, tricep, etc)

Athlean-X: Troubleshooting pain from bicep curls, targeting the brachioradialis, tricep

workout, bicep workout

Bicep curl vs hammer curl -Scott Herman

Bicep/Tricep superset with a variety of band exercises

Shoulder/Upper Back/Neck

Wall angels/Wall slide

>AIS Shoulder Strengthening Protocol Series 1, Series 2, Series 3<

Beginner Back Exercises

The importance of rear delts

Rear delts sitting/wheelchair

Front and side delts seated/wheelchair

Shoulder rehab playlist, scapular muscles rehab

Shoulder Press (be careful, maybe try light weight and/or light resistance bands)

Series of shoulder exercises

>Arch with arm movement (Angel of death at 2:35)<

>YTWL Band Exercises< (here's a floor version with more explanation)

Shoulder External Rotation with Band (rotator cuff)

Shoulder Shrug with Band

>Scapular Push Ups< (consider starting on an incline or against wall)

Serratus Anterior exercises

Floor T exercises

Rotator cuff exercises

Plate warmup & workout from Athlean-X

Trap Plate Raise

An overhead pressing movement would be worth addressing in isolation, or as a compound movement like a plate thruster.

Developing straight arm scapular strength with a <u>straight arm pulldown</u> or similar exercise could be worthwhile.

Simple neck exercises

My approach to neck training

Core exercises

AIS Core training routine

Pallof press, standard approach, more options

Ring core workout from RDP, more options from FitnesFAQ

Transverse Abdominis exercises. The TVA stabilizes the core, protects the spine, supports organs (reducing the load on connective tissue), and squeezes pooled blood out of the abdominal cavity. Gentle Deep Abdominal Exercises Another approach. Some methods involve holding breath, which I'm wary of. Here's the Athlean-X approach. You should try to engage this muscle during all core exercises, but it's hard to target directly. Here is my approach. This video has a wheelchair/sitting option.

> This video explains the components of a well-rounded core workout. < Here's another core workout structured the same way. Another workout. Jesse

demonstrates some of the easier exercises.

Leg/core exercises I put several in Leg 2 of the strength progressions, but certainly feel free to do them as isolation and find others that are appropriate for you.

Wheelchair leg exercises with B&B, more leg exercises

> Hip Strength: hip internal rotation, hip external rotation, hip adduction, hip abduction

Gina Hoegh (highly recommended)<

><u>Medial Glute</u> (I specifically like the leg lift exercise)<, <u>another approach</u>

Mini band side step, box step up, reverse lunge

Calf Exercises (elevated calf raise at 2:45)

The Most Scientific Way to Train Calves, Jeff Nippard

Terminal Knee Extension (within safe ROM)

Reverse TKE/eccentric

Hamstring Exercises

Leg exercises for knee pain.

Bridge with band

Refining the split squat

Knee rehab playlist

Some opinions on knee hyperextension

>Hip hinge from Athlean-X<

Mobility My personal opinion is that stretching is rarely beneficial, and generally inappropriate. The tightness of a muscle is largely neurological, and your body is protecting itself from a perceived threat. The best response is to improve strength and control so that your body doesn't feel the need to intervene. > Why stretching isn't the answer, Mobility myths<. I've had some success with a PNF approach to hamstrings, but strengthening with > eccentric and isometric work has been more effective< (I like to go slower than this). Some good info on squats from GMB. > Stefi vs stretching<

Wall Plank/Handstand Progression

I pursued the handstand as a challenge for my vascular system, here's my video on the topic. This could be dangerous, consult your doctor. You will need to develop some overhead pressing strength before attempting the wall plank. Such as with Overhead Band Press performed as an Isolation Exercise, or standing dumbbell shoulder press as a strength or isolation exercise. A plate or barbell may feel more stable.

Once you can do the <u>Wall Plank (Start low, work up to higher)</u>. It could be performed as skill work to improve technique. 2-3 high quality attempts with plenty of rest between. Then practice holding it for longer or start standing up between attempts and making it a challenge for your vascular system. I stopped for headaches and vision loss, <u>but even healthy people feel like their heads are going to explode</u>. <u>Here is a progression from FitnessFAQs</u>. <u>Here is a frogstand to handstand progression</u>, and <u>Crow pose</u> if you want to pursue it further.

Cardio options

I'm conflicted about what to recommend here. Personally, I started by walking an increasing amount daily until I was accumulating several hours of walking. But that was before I started structured training. At that point I switched to a <a href="https://mill.nlm.nih.gov/hill-ni

My stance on cardio:

- Swimming is great cardio with low injury risk. Consider a snorkel to avoid neck strain.
- If you do any running or sprinting, do it up a hill to reduce impact and increase difficulty. >Also check your running form.
- Never run downhill (very high impact).
- 1-2x/wk is plenty of cardio if it's intense. This was hard for me to accept, but I
 believe it now. Intense cardio deserves a recovery period just like resistance training,
 and it may disrupt the ongoing recovery from workouts. This may be a worthwhile
 tradeoff, but shouldn't be dismissed.
- Walking is great any day, but don't exhaust yourself on rest days. I prefer multiple short walks to one long one.
- When cardio was a high priority I did warm-ups, bodyline drills, and HIIT-style hill sprints as my workout 1x/wk. Other 2 workouts were normal, no additional cardio besides walks.
- My personal opinion is that intensity is crucial, at least for my goals. If you have
 occasional short periods of extreme exertion your body will adapt to deliver more
 energy quickly. But if you spend hours doing low intensity cardio, the incentive is to
 deliver moderate energy levels for longer periods. Both are valuable, but I feel the
 ability to deliver high intensity is more likely to combat the baseline crappiness
 associated with dysautonomia.
- Low to moderate intensity has value too, but it's a different stimulus than high
 intensity. Once you acclimate to a certain intensity level, spending endless hours on it
 has limited payoff.
- Resistance training is a cardiovascular challenge too, but with extra benefits.

Section 3: Example Workouts

I marked some sets as optional, but these are all optional. Your primary goal should be to end the workout before you injure yourself, and keep it light enough that you show up for the next workout.

Example #1. Deep abdominals, back, wrist, and hip exercises.

Warmups 10-15min					
Gentle warmup of choice (<u>example</u>)					
		Τ			
Isolation Exercises		Set	: 1 	Set 2	(optional)
Gentle Deep Abdominal Exercises					
Beginner Back Exercises					
Wrist Flexion, Extension, and Rotation	<u>on</u>				
Hip Internal & External Rotation, Add & Abduction	duction				
Example #2. Warmups, 6 Bodyline Dri	lls, 3 lsc	olation	Exercises		
Warmups 10-15min Wrists		Lea	Swinge		
		Leg Swings			
Old RR bands		Gentle Scapular Pushing/Pulling			
Skill Work					Time
Reverse Plank					
Forward Plank					
Side Plank R					
Side Plank L					
Arch					
Hollow Hold/Deadbug					
Isolation Exercises	Set 1		Set 2 (option	nal)	Set 3 (optional)
Wrist Curls					
4-way Hip Complex					
Incline Scapular Push Ups					

Example #3. 6 Bodyline Drills, 6 Strength Progressions, 6 Isolation Exercises.

Wrists Leg Swings Old RR bands Scapular Pushing/Pulling Skill Work Reverse Plank Time Forward Plank Side Plank R Side Plank L Image: Colspan="2">Image: Colspan="2">Imag	Warmups 10-15min					
Skill Work Reverse Plank Forward Plank Side Plank R Side Plank L Arch Hollow Hold/Deadbug Strength Progressions Set 1 Set 2 Set 3 (optional) Pull Up Progression Push Up Progression Box Squat Progression Box Squat Progression Glute Bridge Progression Isolation Exercises Set 1 Set 2 Set 3 (optional) Set 1 Set 2 Set 3 (optional) Set 2 Set 3 (optional) Set 3 Se	Wrists	Leg Swings				
Reverse Plank Forward Plank Side Plank R Side Plank L Arch Hollow Hold/Deadbug Strength Progressions Set 1 Set 2 Set 3 (optional) Pull Up Progression Push Up Progression Box Squat Progression Row Progression Dip Progression Dip Progression Set 1 Set 2 Set 3 (optional) Set 3 S	Old RR bands	Scapular Pu	9			
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Box Squat Progression Row Progression Dip Progression Glute Bridge Progression Isolation Exercises Set 1 Set 2 Set 3 (optional) Wrist Curls Face Pulls Terminal Knee Extension 4-way Hip Complex Incline Scapular Push Ups	Pull Up Progression					
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Wrist Curls Face Pulls Terminal Knee Extension 4-way Hip Complex Incline Scapular Push Ups	Glute Bridge Progression					
Wrist Curls Face Pulls Terminal Knee Extension 4-way Hip Complex Incline Scapular Push Ups		1	I			
Face Pulls Terminal Knee Extension 4-way Hip Complex Incline Scapular Push Ups		Set 1	Set 2	Set 3 (optional)		
Terminal Knee Extension 4-way Hip Complex Incline Scapular Push Ups	Wrist Curls					
4-way Hip Complex Incline Scapular Push Ups	Face Pulls					
Incline Scapular Push Ups	Terminal Knee Extension					
	4-way Hip Complex					
Trap Plate Raise	Incline Scapular Push Ups					
	Trap Plate Raise					

Example #4. Plate combo as a warmup, 6 paired strength progressions, 4 isolation exercises.

Warmups					
Leg Swings from old RR 1-2min	GMB Wrist Drill on wall 1-2min			Misc scapular pushing & pulling 2min	
Deltoid Dozen (as warmup) 14 1. Pendulum Sweepers 2. Twist Swing 3. Belly Row 4. Face Pull (to chest) 5. High Pendulum Abduct 6. Sword Raise L 7. Sword Raise R	8. Plate Halo CW 9. Plate Halo CCW 10. Plate Press-out 11. Oblique Press-out (alternate R/L) 12. Plate 8 13. Overhead Trap Raise 14. Bus Driver				
Skill/core					
Handstand/wall plank practice	. 5-15min.				
6 Pack Promise core workout	(from app). 6-9r	nin.			
Strength Progressions, optiona					_
Dips set 1 👢	Dips set 2 🔱			(optional)	
DB Squat 1	Squat set 2			(option	al)⊷
Pullups 1 👢	Pullups 2 🕕			(optiona	al) 👢
Pushups 1 🔼	Pushups 2 🔼	(optional)←		al)↩	
Bulg Split Squat 1 Bulg Split Squ		at 2 (optional)			
Rows set 1 Rows set 2 Rows set 2 Rows set 2 Rows		(optional)←		al)⊷ 	
Isolation Exercises		Set 1	Set	t 2	Set 3 (optional)
Face Pulls					
Band walk/ side shuffle					
Bicep/tricep superset					
Egyptian lateral raise (both sid	les)				

Example #5. Upper-body workout with 4 strength progressions, 5 isolation exercises.

Warmups 10-15min			
Wrists			
Old RR bands	Scapular	Pushing/Pull	ing
	•		
Strength Progressions	Set 1	Set 2	Set 3 (optional)
Pull Up Progression			
Push Up Progression			
Row Progression			
Dip Progression			
		-	
Isolation Exercises	Set 1	Set 2	Set 3 (optional)
Wrist Curls			
Face Pulls			
Incline Scapular Push Ups			
Straight arm pull downs			
Bicep/tricep exercises			

Example #6. Lower-body workout with 3 strength progressions, 4 isolation exercises.

Warmups 10-15min				
Leg Swings Reverse lunge				
Box squat practice	Light glute	e bridge prac	etice	
0.31.04				
Skill Work				
Balance Progression 5min				
Strength Progressions	Set 1	Set 2	Set 3 (optional)	
Box Squat Progression				
Glute Bridge Progression				
Hamstring Curl with Bands				
Isolation Exercises	Set 1	Set 2	Set 3 (optional)	
Calf raises, elevated calf raises				
TVA vacuum/core exercises				
Terminal Knee Extension				
4-way Hip Complex				

Section 4: Fitness & Posture Resources

<u>I started out with the Recommended Routine from r/bodyweightfitness</u>. R/bodyweightfitness is without a doubt the best fitness community online and an excellent resource for any fitness topic, I haven't found r/fitness helpful. Comment on the most recent daily discussion thread if you have questions. You can ask about posture, nutrition, resistance bands, etc. <u>Here is their training guide</u>. They updated the routine, so there is an old and new version. <u>The old version has bodyline drills which I found valuable</u>. <u>The new version has a core triplet instead</u>. I like the old warmups, I haven't tried the new warmups.

Posture videos

Types of bad posture

Good explanation and exercises

>Athlean-X cues for posture<

Wall press/wall slide (I do this every morning)

Fix "Anterior Pelvic Tilt" in 10 Minutes/Day - Jeremy Ethier

General fitness links (concepts, technique, etc)

How to Develop an Exercise Program for a Lower Back Injury, Remi Sovran

https://sci-fit.net/articles/

r/bodyweightfitness technique Thursday.

r/bodyweightfitness concept Wednesday.

Interesting podcast video about gymnastics/calisthenics.

Why muscles get fatigued

Rings 101

Common weak muscles

Time under tension

>Athlean-X explanation of splits vs full body<

Red Delta Project full body vs split routines

Benefits of high intensity cardio/HIIT (note: increased injury risk)

In defense of low intensity cardio

Priorities for success

Muscle Protein Synthesis and training (long, in depth)

Pt 2. MPS and nutrition (also pretty long)

Cheating, overload, and muscle recruitment

Be careful who you emulate, and never compromise on quality.

Most people underestimate how many reps they can do.

Efficiency vs effectiveness and exercise selection for different priorities.

Tips for correcting imbalances from Jeff Nippard.

Popping and crunching joints

Heavy negatives

>Injury prevention<

Weightlifters with EDS discussion

Nutrition

Bulk or cut? r/bodyweightfitness

Energy balance and protein synthesis (counter argument to bulk & cut).

A simple approach to macros and calories

Gaining muscle in a deficit (recomposition)

Another approach to recomposition (eat more on workout days)

Just some info about beans.

Don't be afraid of sodium

<u>Discussion of pros and cons of plant based diets with a researcher with EDS</u>. <u>Here's an</u>

analysis of plant based protein for athletes and which micronutrients to watch out for.

Losing body fat for men & women

>10 fitness myths in 10 minutes. 7 more myths. 8 more myths. <

>Are you taking enough supplements?<

Misc

Exercise and EDS
How David Blaine held his breath for 17 minutes
Exercise and the brain
>Injury risk reduction<

YouTube playlists

Jeff Nippard fundamentals series

Athlean-X common injury prevention

Calisthenicmovement "Perfect" series

Saturnomovement Handstand Journey

Scott Herman common mistakes

Scientific Principles of Strength Training

Info by, for, or about women and strength training

Given that hypermobility symptoms are often more severe among women, I'd be remiss if I didn't include relevant information. Many of the strength programs listed early on are from female athletes with quality YouTube Channels. These are miscellaneous articles and videos you might find interesting.

Women and strength training strengthsensei.com

Women and strength training strongerbyscience.com

Megsquats is a powerlifter and strength coach with some excellent content.

Marisa has an excellent exercise library on her channel.

Meghan Callaway has a extensive collection of exercise demos (no commentary though)

Female calisthenics world championship freestyle.

Queen of the bar competition.

Chelsealifts has a lot of food related content, here's a video on glutes

<u>DLB is an elite bodybuilder. She's also featured on other channels. Here's another fun one. Leigh Peele has some good articles.</u>

Elite female powerlifters.

Nancy Burpee is an accomplished swimmer with EDS

Stefi Cohen deadlifts 4.3x her bodyweight

My favorite fitness channels

My favorite channel is Athlean-X by Jeff Cavaliere. I feel silly recommending one of the most popular fitness channels on Youtube, but he has the <u>strongest emphasis on safety and functional fitness</u> of any channel I've found. Although his video titles are a bit click-baity, his actual content is fantastic. He's great at communicating scientific concepts and <u>nutritional information</u>, and his ><u>motivational videos</u>< are good too. Considering the incredible volume of content he has produced, his channel is the single best source of free exercise information.

There is an <u>Athlean-XX channel for women</u> which some of you might find applicable. I was a bit disappointed. Like many fitness channels marketed to women, there's an emphasis on aesthetics and fat loss, along with euphemisms like "sculpting and toning" rather than increasing strength and muscle mass. <u>The tips for beginning strength training are good.</u> The XX channel has an okay video on <u>getting to your first pull-up</u>, but lacks the depth of the main channel.

<u>Shredded Sport Science</u>. As a newcomer to fitness it's hard to spot misinformation. Fortunately, the fitness experts find it pretty easy to tell. <u>Shredded Sport Science has analyzed Athlean-X</u>, as <u>well as Austin Dunham and others</u>. If you find a channel that is appealing, look for analysis like these by people with experience and knowledge. Good information will always stand up to scrutiny.

<u>Every Damn Day has assessments of various channels</u> (fair warning: he swears so much some of his videos have age restrictions). <u>He followed it up with more recommendations for quality channels</u>. <u>Here's a short and long video about Athlean-X</u>.

Red Delta Project has some good calisthenics/bodyweight stuff. <u>Here's a video where he touches on a few topics.</u>

FitnessFAQs has an extensive collection of tutorials for bodyweight exercises. Here's <u>demonstration of the Recommended Routine</u>, as well as <u>injury prevention exercises like</u> YTWL.

<u>Calisthenicmovement has great info</u>, and a good emphasis on safety and quality. <u>SaturnoMovement has good explanations of concepts</u> and exercises. His <u>beginner full body</u> <u>video</u> is excellent.

Megsquats has <u>great information</u>, but also has lots of <u>fun videos</u> and <u>collaborations</u>. Here's her ><u>tips for beginner lifters</u>< (highly recommended, especially the 'why' section)

Jeff Nippard is great at communicating the limitations and applicability of studies

Scott Herman has a ton of exercise demos, gets right to the point, and prioritizes safety.

Remi Sovran has a fair bit of content regarding low back pain. I haven't watched all his content, but I like what I've seen.

Gina Hoegh doesn't have much content, but it's good stuff. Maybe if we double her subscriber count she'll be motivated to upload more..

Stefi Cohen is a PT with great content

Barbell Medicine has some great content. Here are some I enjoyed: >4 Steps For Managing Pain In The Gym (highly recommended)<, Episode 20: Pain, Soft Tissue Work, and Nocebo, Episode 19: Pain and Injury Management for Lifters, 2019 Chicago Q/A: Drs. Baraki and Feigenbaum discuss SUGAR, risks of training, menopause, and more!, Toronto Q/A Part 2: Steady State vs HIIT, Genetics, and The Medical Establishment, Two Minute Tuesday: Resistance Training for Injury Risk Reduction in Endurance Athletes, 2019 Brooklyn Q/A Part II: Who Would Win In A Fight? Plus Gluten Intolerance, Brooklyn Q/A Part 1: How to Train a CrossFitter, Weight Gain, Salt, and More!,

Bad sources/dangerous exercises. I recommend you avoid these channels. It might be unfair to single these channels out, terrible advice is the default these days. But when bad advice comes from popular sources, it becomes dangerous.

Pretty much anything on instagram (sorry, it's just not a platform that lends itself to nuanced information).

<u>ThenX/Chris Heria</u> has many inaccuracies in his content, plus he creates drama by being petty and mean towards other YouTubers.

Thomas DeLauer is another one to avoid. He frequently misrepresents studies and <u>equates</u> <u>bananas to table sugar</u>, instead encouraging people to purchase his supplements.

Vshred is a particularly bad source of information.

Brittany Dawn is also a source of bad advice.

I'd suggest vou avoid Cross Fit

Be wary of dangerous blended exercises presented as "functional fitness"

Exercise equipment

My wrists gave me a lot of trouble the first few months of strength training. Wrist braces/straps were helpful. I bought cheap ones and the rubber is flaking off, but they work fine. They transfer some of the load directly to the forearm. There are rigid ones as well. I also found athletic tape helpful with wrists, and used both for a while.

<u>I got this set of resistance bands</u> and they've held up to frequent use. <u>I use this style of band for warm ups</u>, I got mine from physical therapy. It's nice to have a very light band long enough to double up.

Parallettes provide something to grip when doing floor exercises like planks and push-ups. This is just an example, I have cheap plastic ones that aren't worth recommending. These might help if pushing against the floor aggravates your wrists.

I wish I had gotten gymnastic rings earlier, they make it easy to control the difficulty of exercises like rows. I have this set and I'm very happy with it. The buckles are heavy duty, perhaps not the easiest to adjust but very durable. I got the plain ones, but they have some with marks to indicate height. I wrapped athletic tape around the rings for a more comfortable grip. Some of you might prefer TRX style handles. Here is an example. You could use the handles from a resistance band set, along with webbing, if you trust them to take your weight. I also have a doorway pull-up bar, but prefer the rings.

I have used this head harness for neck exercises and have no complaints.

<u>I got these grippers and have no complaints</u>, though one would have been enough. I got <u>this</u> <u>weird thing</u> to strengthen my fingers in the other direction. There are other styles, and rubber bands probably work too.

<u>The Crossover Symmetry system includes a training guide to shoulder rehab.</u> I don't have experience with this product.

Tips/Final suggestions.

Workout Consistency.

My rule is that I have to show up for my scheduled workouts, but once I start the warmups I can use my judgement about what I can handle. My primary goal is to maintain consistency. Early on I intentionally went very light to prove to myself that consistency is more important than intensity or volume. If I'm not recovered in 48hrs, I may have overextended myself. Other suggestions for consistency:

- Set a specific schedule. I like MWF first thing in the morning. Whatever days and times work for you, pin them down and build your schedule around the workouts.
- Consider home workouts. Many people like the social aspect of gyms, or being told what to do in a class. But it doesn't take much equipment to get a good home workout, and it eliminates the barrier of getting to the gym.
- Have accommodations ready. If you need wrist braces, tape, etc, have them ready so it doesn't disrupt your workout.
- Make a playlist of music. This can make the experience more enjoyable.
- Involve your rest days. I watch videos on technique, recovery, etc. I also review and plan workouts on rest days. By doing something fitness related I maintain momentum. I also try to muster some enthusiasm for my next workout the night before so I'm mentally prepared in the morning.

Avoiding Injury

- Watch out for transient forces and awkward positions. Even if an exercise and intensity is safe, you may briefly overload your connective tissue getting into or out of position.
- Be extra cautious on rest days. The vast majority of my injuries occurred after workouts when I was fatigued and recovering.
- Continuously refine technique. You need to hold yourself to a higher standard than most. Watch videos, record yourself, become an expert.

 Add volume and intensity slowly. My rule early on was to not add more than two sets from my last workout, and if I increased intensity I would cut back on volume until I was sure I recovered.

Building muscle and strength

There are three pillars of strength, they are all necessary for success. **Training** at a meaningful intensity and appropriate frequency. **Nutrition** that provides adequate protein and micronutrients, supplementing as needed. **Recovery habits** such as adequate sleep, and avoiding stress and injury. You may feel that training is your biggest barrier, but if you have dysautonomia you may need to focus your efforts on recovery. I have some tips for sleep and encouraging the parasympathetic nervous system in Methods & Resources.

Other ideas

I've got no business giving advice, but these have been helpful for me.

Start a log. It has to be appropriate for you, here are some ideas.

Record workouts, reps, times, experience with particular exercises

Record calorie intake, protein intake, supplement adherence.

Injuries and activities.

Digestive issues and food.

Start some lists

Supplements you're considering.

Exercises that appeal to you.

Most problematic/hypermobile joints, strategies and devices to help.

Tight muscles, & weak muscles. Find tests to differentiate. My policy is strengthen first, stretch later.

Habits and activities that aggravate symptoms, workarounds and strategies Questions for you physical therapist.

General tips

Start the day deliberately. Whatever your response plan is, try to get it rolling in the morning before your symptoms overwhelm you.

Posture is hard. People talk like you just get in the habit and it's effortless. No, it's really hard if you're trying to maintain good posture all day. It's worth it though. My thoughts on posture are in M&R.

Focus on consistency. Try to pick a few things that you can be consistent with, then gradually add more if you're able. Here are my core priorities.

- Consistent bedtime routine.
- Avoid stressful and injurious activities.
- Protein shakes in morning and evening plus hitting overall protein goal.
- Show up for scheduled workouts.
- At least a gallon of water daily.
- Lay down and encourage my PSNS 2x/day. (Must have eye mask for complete darkness)

Eating more/eating less

These are some variables that I adjust to achieve my goals. A combination might be most effective.

Change what you eat If you want to get more calories, choose from a selection of nutritious foods that are calorie dense like peanut butter, avocados, etc. If you're trying to lose body fat, choose from a selection of foods that are high volume, low calorie to fill you up. Pickles instead of potato chips, flavored water instead of juice or soda, carrots, celery, etc. Figure out some foods you like that fit your goals and choose from those when you get hungry.

Change when you eat. If you want to eat a lot of food, it's probably best to start early. If you'd rather cut back, try waiting until noon or later to start eating. There may be an adjustment period before your ghrelin takes the hint. Try drinking a lot of water instead of breakfast. I have a protein shake in the morning, but rarely eat anything before noon.

Change how much you eat. You eat the same stuff on the same schedule, but you choose smaller portions and eat slowly so you fill up before you overeat. Or eat larger portions quickly if you want to pack in the calories.

Food Tips

Protein is very satiating. If you are concerned you'll overeat, drink a protein shake before the meal and/or make sure the meal has solid protein content.

Consistency helps. I eat really similar foods day to day, which makes it easier to make small adjustments.

Everyone is bad at estimating how much they eat vs what they need. **Everyone.** Track everything you eat for a week or two and see how many calories you're getting and what your macros look like. Weight yourself, preferably in the mornings after going to the bathroom but before food and water. Use several calculators to estimate your TDEE. Armed with these numbers, start making small adjustments and watch the change.

Protein shakes, not carb shakes. I used to make fruit smoothies, but I realized they don't support my goals because they are mostly carbs. So now I just mix protein isolate with water and HMB, and it increases my protein as a percentage of my daily calories. There are a lot of delicious protein powders out there, but I suggest you find one with a high percentage protein. For instance, True Nutrition pea protein isolate has 25g protein in a 30g scoop. Their soy isolate has 27g/30g. With the optional protein enzyme, the absorption rate should be good as well. It's not a thrilling beverage, but I can get 50g protein in my morning shake and start out on a strong footing.

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