



How Getting the Right Muscles Activated and Following a Structured Progression Helped “Anna” Avoid Surgery and Overcome a 5 Month Struggle with Shoulder Pain in Just 2 Weeks

OVERVIEW

This case study will highlight Anna (a pseudonym) - a competitive gymnast who typically trains 3-5 hours per day, 5 days a week - and her rehab journey that led to much frustration despite hers and her parent’s efforts at doing everything they could to heal her injury.

Anna’s mother kept excellent detailed notes of their interactions with every therapist and doctor, allowing Coach E to share his thinking on why the previous attempts at rehab failed and why he chose to prescribe the exercises he did that led to eliminating 5 months of pain and stiffness in 2 weeks.

1

HISTORY

A little bit about Anna and what led to her pain.

2

THE PROBLEM. SOLVED.

A detailed timeline of Anna’s rehab journey.

3

THE SOLUTION

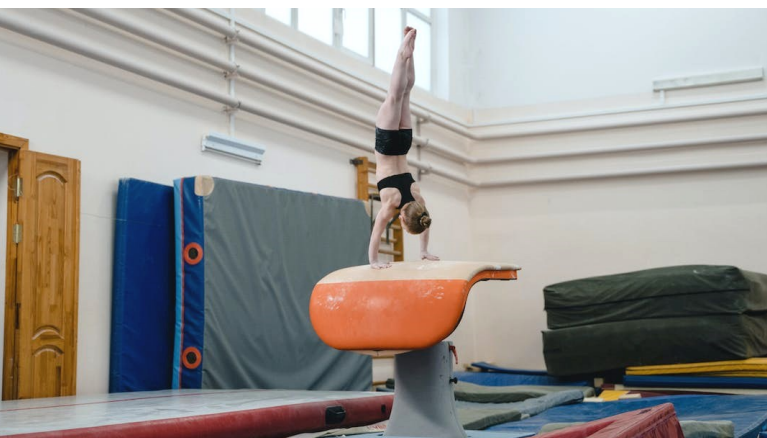
The 4 Pillars to Pain-Free Movement provide the solution at last.

HISTORY

Anna first injured her shoulder after a session focused on learning the “giant”, which is an advanced move where the gymnast is hanging onto a bar and spins around in a circle with a brief pause at the top in the handstand position. Anna experienced mild pain after this training session.



A few days later, Anna was training the vault, which involves the gymnast sprinting full speed then jumping off of a springboard landing on their hands on the vault apparatus to then explode off of to perform further spins and flips before landing.



After one particular attempt she experienced significant pain.

This led to Anna's mother to do what's commonly done after an athlete suffers an injury that's not catastrophic e.g. a broken bone, which was to seek out rehab on their own, starting with physiotherapy.

Unfortunately, over the course of 2 months the physio wasn't effective, leading Anna to another physio, 2 sports medicine doctors, a chiropractor, an osteopath, a nerve specialist doctor and finally an orthopaedic surgeon.

(If you're interested in learning more about the interventions and why Coach E thinks they were ineffective, see Appendix A and B)

THE PROBLEM. SOLVED.

On the following pages I've included the full details of Anna's 5 months of rehab because I know many people can relate and perhaps feel like they've "done everything" they can to fix their issue.

The most important thing is we were able to make quick and lasting progress once we avoided things that continued irritating the shoulder and began waking up sleepy muscles as illustrated by this graph:

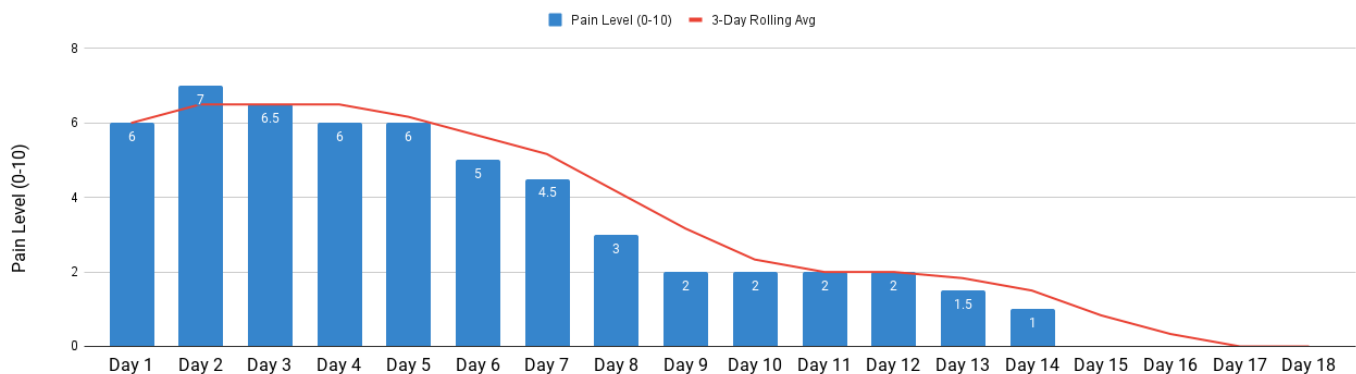


Table 1: Anna's pain using the 0-10 numeric pain rating scale (NPRS) where 0 is no pain and 10 is severe since the 1st session with Coach E. Anna has returned to full gymnastics training and continues to be pain-free through August 2023

Some of the errors made that contributed to 5 months of suffering include:

- Static stretching was employed for an injury involving damaged tissue. Imagine for a moment tissue is damaged, whether it's muscle, ligament or a piece of rope - what do you think is going to happen if you pull on it pretty hard and hold that force for 30-60 seconds?
- There was no consistent use of a measure to gauge progress and get feedback from Anna
- Exercises given too early in the rehab process i.e. before loaded exercises above shoulder height are used, activation and function of the muscles that stabilize movements above shoulder height should be trained
- More focus on passive modalities like mobilizations, massage, acupuncture etc... vs. the only active modality there is - movement using your muscles
- Rest was prescribed, which never addresses the root cause - if anything rest at most for up to 48-72 hours of the initial injury, outside of this movement is necessary

My partner - orthopaedic surgeon Dr. Boynton - and I see cases like this over and over where a patient has pain or an injury that should without a doubt heal, but is provided ineffective care.

Because of the lack of results, the patient is often led down the path to surgery and in this day and age an even worse outcome - opioid addiction.

Thus we've provided this detailed case study to give hope to those who may be hopeless and provide insights into why we think our approach is effective where others fail.

We asked Anna's mother to comment on her experience working with Eric and following the Precision Movement method and this is what she said:

“

I contacted Eric for my daughter Anna after 5 months of unsuccessful treatment of a gymnastics shoulder injury. Her resting pain level was 4/5 and she had limited range of motion. She saw multiple sports medical practitioners and followed all recommended treatment with minimal success.

Eric performed a very thorough assessment and identified the issue. He provided specific exercises with access to demonstration videos and a clear treatment plan. After 2 weeks of following Eric's exercise program Anna had zero pain and almost full range of motion!

Eric continued to provide updated detailed exercise programs as Anna's strength and range improved. Eric took the time to understand Anna's training goals and timing and created a plan so that she would be able to return to full competitive gymnastics training without pushing too far too fast.

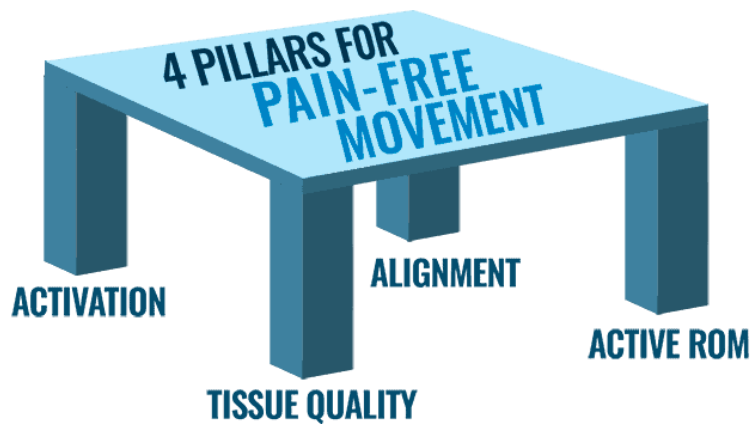
Anna continues to be pain-free, has complete range of motion and is back to full intensive gymnastics training. I can't express how grateful we were to find Eric. His understanding of body movement and unique correcting exercises to isolate and treat the issue is incredible.

THE SOLUTION

Unfortunately, Anna's case is common - the average amount of time people are in pain by the time I see them is 6-7 months, which in my opinion is 5-6 months too long!

Our approach is based on my 19+ years of coaching experience and Dr. B's 30+ years of experience as an orthopaedic surgeon who through exercise diverted 70% of her surgical consults away from the operating table. Imagine that - a surgeon helping her patients avoid surgery!

It's this experience and our relentless pursuit of knowledge that's culminated in our 4 Pillars for Pain-Free Movement.



These pillars form the foundation of quality, pain-free movement - if any are missing the foundation is on shaky ground like a house built on sand.

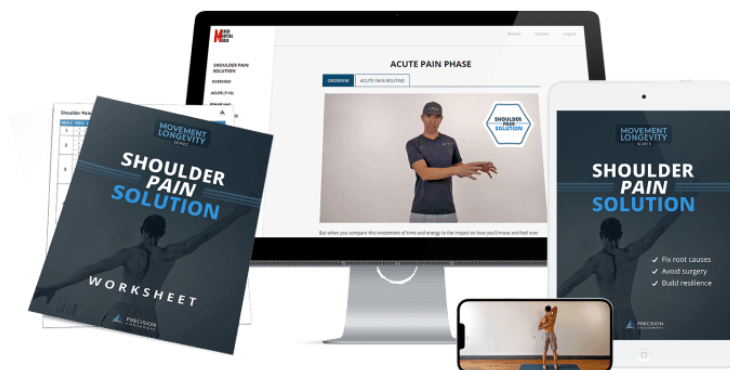
For example, if you try to perform an exercise but you don't have proper Activation of an important stabilizer muscle like the serratus anterior, the exercise could put more wear and tear on an already damaged rotator cuff tendon.

Another example is performing an exercise in a range of motion (ROM) that you're not ready for. This happened to Anna where she was prescribed an exercise above shoulder height when it was painful to even get into this ROM, let alone perform exercises there.

After following the Precision Movement approach Anna's pain was completely eliminated in just 2 weeks and after progressing the program after 6 weeks she was back to full gymnastics training and doing things like this:



To have us guide you through the process of applying these pillars, where you'll discover the right exercises to do at the right time, we invite you to sign up for our Shoulder Pain Solution, which starts you off with an assessment then guides you through routines that take just 15-20 minutes to do and can be done at home.



[CLICK HERE FOR PAIN-FREE SHOULDERS](#)

APPENDIX A - THE REHAB JOURNEY

Anna's Injury

- Pain after giant training
- A few days later, severe pain after a vault attempt

Nov 16, 2022

My theory is that giant training resulted in irritation due to traction (the pulling the arm out of the socket) and created laxity.

Performing vault a few days later led to injury due to laxity and decreased stability.

Physio #1

- Diagnosed rotator cuff issue, specifically mentioning weak tendons
- Pain and ROM worsened over this time

See Appendix for list of all exercises given and commentary from Coach E

Nov 23 - Dec 22, 2022

Two things stick out for me about this experience:

1. On Dec 9 when ROM was assessed as decreasing, stretches were prescribed.

This is a common mistake in rehab because stretching can cause further tearing of already torn tissue as well as muscular inhibition resulting in greater instability - the opposite of what the rehab should be doing.

2. The physio said to expect the exercises to make things worse during/after. On the contrary, I tell people the exercises should make you feel better during/after or at the very least, not worsen existing symptoms.

Sports Medicine Doctor #1

- Requests MRI noting if indeed tendonitis it should've improved
- Rest completely for 1-2 weeks
- Use TENS machine and ice
- Avoid advil/tylenol

Dec 22, 2022

Doctors* typically know less about exercise than physios, so the assumption that the exercises should've helped indicates a lack of understanding the difference between good and bad exercises.

MRI is reasonable given the mechanism of injury.

Rest and TENS will never address the root cause of any problem.

** Most doctors, outside of Precision Movement's Chief Medical Officer Dr. Erin Boynton*

Update

- Shoulder felt just a little bit better after 2 full weeks of rest
- Resumed rehab exercises after

Jan 2, 2023

Outside of severe 9-10 out of 10 pain due to a break or massive tear, resting up to 72 hours is the max we'd recommend.

The sooner you get moving the better. Movement is the only way to address the root cause of the problem and it facilitates healing in various ways.

Sports Medicine Doctor #2

- Refer to orthopaedic surgeon
- Requests 2nd MRI (more power)
- Concerned the issue is deeper in the joint, perhaps labrum
- Continue physio

Jan 17, 2023

Too soon to consider surgery for such a young person and if the first MRI didn't show anything, maybe MRI'ing the shoulder to death isn't the answer?

Physio #2

- Worked on trying to loosen the area around the shoulder and shoulder blade
- Recommended various stretching and strengthening exercises

Jan 26 - Feb 23, 2023

Same old.

Chiro

- Thinks infraspinatus tendonitis
- Recommends deep tissue massage, acupuncture and electroshock
- Prescribed various stretches and exercises

Feb 23 - Mar 30, 2023

See above.

Osteopath

- Diagnosed frozen shoulder and recommended stretches

Mar 30, 2023

Ditto.

Nerve Specialist Doctor

- Performed nerve testing

April 4, 2023

Nerve testing could reveal a potential root cause, but this should be done after appropriate interventions have been tried, which was not the case here. Thankfully no nerve issues were present.

Orthopaedic Surgeon

- Prescribed anti-inflammatory cream
- Recommends continuing stretches and exercises and to add daily hanging from a bar

April 4, 2023

Anti-inflammatory cream = band-aid.

Hanging is something that's been making the rounds on social media as the magical cure-all for shoulder pain due to impingement including rotator cuff tendonitis and bursitis.

Unfortunately, it's anything but and can help some but also lead to further problems for many.

Coach E

- Recommended Anna come NOT on painkillers or anti-inflammatories to get a true picture of the shoulder
- Performed assessment looking at muscle activation, posture and alignment and movement patterns
- Prescribed 5 exercises (10-15 mins) to be performed twice/day
- Saw Anna for 3 sessions total in 6 weeks, after which she was discharged due to being pain-free and returning to full gymnastics training

Apr 28 - June 13, 2023

I found the following and prescribed a doable routine to begin addressing these issues:

- Excessive thoracic kyphosis
- Forward head
- Excessive lumbar lordosis
- Rounded shoulders
- Anteriorly tilted scapulae
- Poor serratus anterior function
- Increased pain lifting arm to 90° and beyond

We performed 5 exercises and after walking in with pain from 5-6 out of 10, she walked out with pain from 4-5 but said she felt a little looser.

I progressed her exercises and return to training over a 6 week period, after which she was back at full capacity.

APPENDIX B - COACH E ON COMMON SHOULDER REHAB EXERCISES

I've provided this info primarily for rehab and exercise professionals to help them better understand my perspective on exercise prescription and program design for shoulder pain after an acute injury and chronic shoulder pain in the hopes of improving patient outcomes and avoiding unnecessary pain, suffering and time away from doing the active things that contribute to health and joy.

However those interested in understanding exercise and rehab science for their own movement longevity will appreciate this info as well and I say kudos to you!

I have not indicated what practitioner prescribed the exercises because it does not matter.

The other important piece I do not know about for sure but can confidently state is that the coaching and cueing of the exercises themselves was lacking. This is based on what I've seen over decades of training and exercise coaching.

Exercise	Approx. Timing	Coach E's Comments
Side lying lower arm lifting	Month 1	Not sure the direction of the lift so no
Bicep pull with resistance	Month 1	Avoid bicep work with shoulder pain
Front Arm Raise, arm across the body	Month 1	Straight arm raises (target delts) hard to do with good scapular/spine position unless very precise coaching
Front Arm Raise arm inline with torso	Month 1	They also target the deltoids, which are superficial, whereas focus should be on deep stabilizers e.g. serratus anterior, rotator cuff
Side Arm Raise	Month 1	
Lying on your side, rotate arm	Month 1	Can easily put shoulder into impingement
Pectoralis Major Stretch	Month 2	Static stretching can further tear already torn tissue and inhibit muscles needed for stability; IMO contraindicated in injury rehab
Lat Stretch	Month 2	

Shoulder external rotation 0	Month 2	Why load with weights before developing
Scapular retraction in prone	Month 2	Shitty exercise
Incline pec stretch	Month 2	See above comments re: stretching
Row	Month 3	Avoid compound movements before fundamentals are established e.g. proper
Shoulder External Rotation 45 degrees	Month 3	These would be expected to be ok at this time, but coaching/cueing and establishment of good scapular positioning a pre-requisite, which wasn't met to this
Shoulder Internal Rotation	Month 3	
AROM – shoulder circles with large ball against the wall	Month 3	If pain, keep shoulder work below 90° otherwise easy to irritate already painful
External rotation	Month 4	Stretching not recommended but this is one of the worst stretches for shoulder rehab and one therapists love for some reason
Sleeper stretch	Month 4	
Stretching by lying over her	Month 4	
Sleeper stretch	Month 4	
Upright sleeper stretch against a wall	Month 4	
Sleeper stretch with pushing downwards & upwards	Month 4	
Sword while rotating arm	Month 4	Fine exercises but don't bring arm overhead until pain is low (3 or below), which Anna wasn't at this point
CARs	Month 5	
Sword stretch with band	Month 5	

Hanging

Month 5

Hanging has made the rounds on social media because of a book based on hype but most people can't do it well nor does it address fundamental problems like lack of deep muscle activation

[The exercises in this PDF were also given in Month 2.](#)

Coach E's Comments on the exercises in the PDF: the first two would be easy to do in poor scapular position, while the last two take the shoulder above 90° before it is ready.