

Don Babbitt

Revolutions in Training for the Throwing Events

- 1) Balanced training is very important
- 2) Other critical training areas include: strength (special & absolute), speed, agility, flexibility, psychological preparation
- 3) Technical training for the specific event is most important

Absolute Strength

Core Lifts

1) Power Lifts

- a) Bench or Incline Press
- b) Front or Back Squat
- c) Dead Lift Variations

2) Olympic Lifts

- a) Clean
- b) Snatch
- c) Push Press or Jerk

Absolute Strength

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c) **Dead Lift Variations**

2) Olympic Lifts

a) Clean

b) Snatch

c) Push Press or Jerk

Strength Levels for Male 20m Rotational Shot Putters

Bodyweight	Bench Press	Back Squat	Clean	Snatch	Push Jerk
225lbs	175% of BW	210% of BW	160% of BW	110% of BW	155% of BW
250lbs	170% of BW	200% of BW	150% of BW	105% of BW	150% of BW
275lbs	160% of BW	190% of BW	140% of BW	100% of BW	145% of BW
300lbs	155% of BW	185% of BW	130% of BW	95% of BW	140% of BW

- This table is written for an individual who is between 6-0 and 6-2 tall. The general rule of thumb is to adjust the percentage of body weight for the power lifts needed per lift by +/- 5% for each 1" difference in height. For the Olympic lifts the adjustment will be +/- 3.25% for every 1" difference in height of the individual.

Power Lifting Data for Elite Male Shot Putters

Name	Height	Weight	Bench Press	Back Squat
John Brenner 22.52m (glider)	6-3 ½	285	184%	257%
Adam Nelson 22.51m	6-1	260	192%	269%
Reese Hoffa 22.43m	6-0	305	159%	182%
John Godina 22.00m	6-4	274	182%	206%
Randy Barnes 21.88m	6-4 ½	285	184%	228%
Augie Wolf 21.73m	6-7	270	145%	200%
Brent Noon 21.47m	6-1 ½	260	219%	273%
Greg Tafralis 21.45m	6-0	270	192%	266%
Dean Crouser 21.09m	6-5	260	140%	192%
Brad Snyder 20.86m (glider)	6-4	282	193%	216%
Brian Muir 20.58m	6-3	230	156%	230%
Hank Kraychir 20.56m	6-0 ½	270	215%	257%
Brian Miller 20.55m	6-3	310	145%	180%
Rhuben Williams 20.25m	5-9	248	178%	251%
John Frazier 20.06m	6-0 ½	245	179%	288%
Daniel Vanek 19.39m	6-1	270	180%	222%
Ron McKee 19.37m	5-8 ¾	235	196%	298%
Kyle Helf 18.97m	6-1 ½	227	161%	200%
Curt Thomas 18.47m	6-5	270	170%	194%

Olympic Lifting Data For Elite Male Shot Putters

Name	Height	Weight	Clean	Snatch
John Brenner 22.52m (glider)	6-3 ½	285	149%	116%
Adam Nelson 22.51m	6-1	260	3x144%	3x100%
Reese Hoffa 22.43m	6-0	305	123%	94%
John Godina 22.00m	6-4	274	136%	88%
Brent Noon 21.47m	6-1 ½	260	152%	114%
Dean Crouser 21.09m	6-5	260	140%	102%
Brad Snyder 20.86m (glider)	6-4	282	151%	116%
Brian Muir 20.58m	6-3	230	148%	95%
Brian Miller 20.55m	6-3	310	120%	85%
Rhuben Williams 20.25m	5-9	247	140%	---
Daniel Vanek 19.39m	6-1	270	138%	106%
Kyle Helf 18.97m	6-1 ½	227	134%	95%

Javelin Throwing Requirements/Norms

Compiled by: Kari Ihalainen, National Javelin Coach, Korea
Strength (MEN)

Competition Level	Back Squat (kg)	Front Squat (kg)	Power Clean (kg)	Power Snatch (kg)	Pullover (kg)	Bench Press (kg)	Jerk (kg)
50m	100	80	70	50	60	70	70
55m	110	90	80	60	70	80	80
60m	120	100	90	70	80	90	90
65m	130	110	100	75	90	100	100
70m	150	130	115	85	95	115	110
75m	170	150	130	95	100	120	120
80m	190	170	140	100	110	135	130
85m	200	180	145	110	120	140	140
90m	210	190	150	120	125	145	150
95m	220	200	160	125	130	150	160

Javelin Throwing Requirements/Norms

Compiled by: Kari Ihalainen, National Javelin Coach, Korea
Strength (WOMEN)

Competition Level	Back Squat (kg)	Front Squat (kg)	Power Clean (kg)	Power Snatch (kg)	Pullover (kg)	Bench Press (kg)	Jerk (kg)
40m	60	50	60	45	45	40	45
45m	80	70	70	50	50	50	55
50m	90	75	75	55	60	60	65
55m	100	80	80	60	65	70	75
60m	120	95	95	70	70	75	90
65m	130	105	105	75	85	80	95
70m	140	110	110	80	90	90	100
75m	150	115	115	85	95	95	105

Javelin Throwing Requirements/Norms

Compiled by: Kari Ihalainen, National Javelin Coach, Korea
Explosive Power (MEN)

Competition Level	Standing Long Jump (cm)	Standing 3-Jumps (cm)	Standing 5-Jumps (cm)	Overhead Backward (5.4kg)	Underhand Throw (5.4kg)	Overhead Forward (4kg)	Overhead Forward (2kg)
50m	260	810	1350	1500	1250	1200	1500
55m	270	820	1400	1550	1300	1300	1600
60m	280	840	1450	1650	1400	1400	1800
65m	290	870	1500	1750	1600	1500	2000
70m	300	900	1580	1850	1700	1600	2200
75m	305	930	1600	1950	1750	1700	2400
80m	310	960	1620	2000	1800	1800	2600
85m	320	1000	1640	2050	1850	1850	2700
90m	325	1020	1660	2100	1900	1900	2800
95m	330	1030	1680	2150	1950	1950	3000

Javelin Throwing Requirements/Norms

Compiled by: Kari Ihalainen, National Javelin Coach, Korea

Explosive Power (WOMEN)

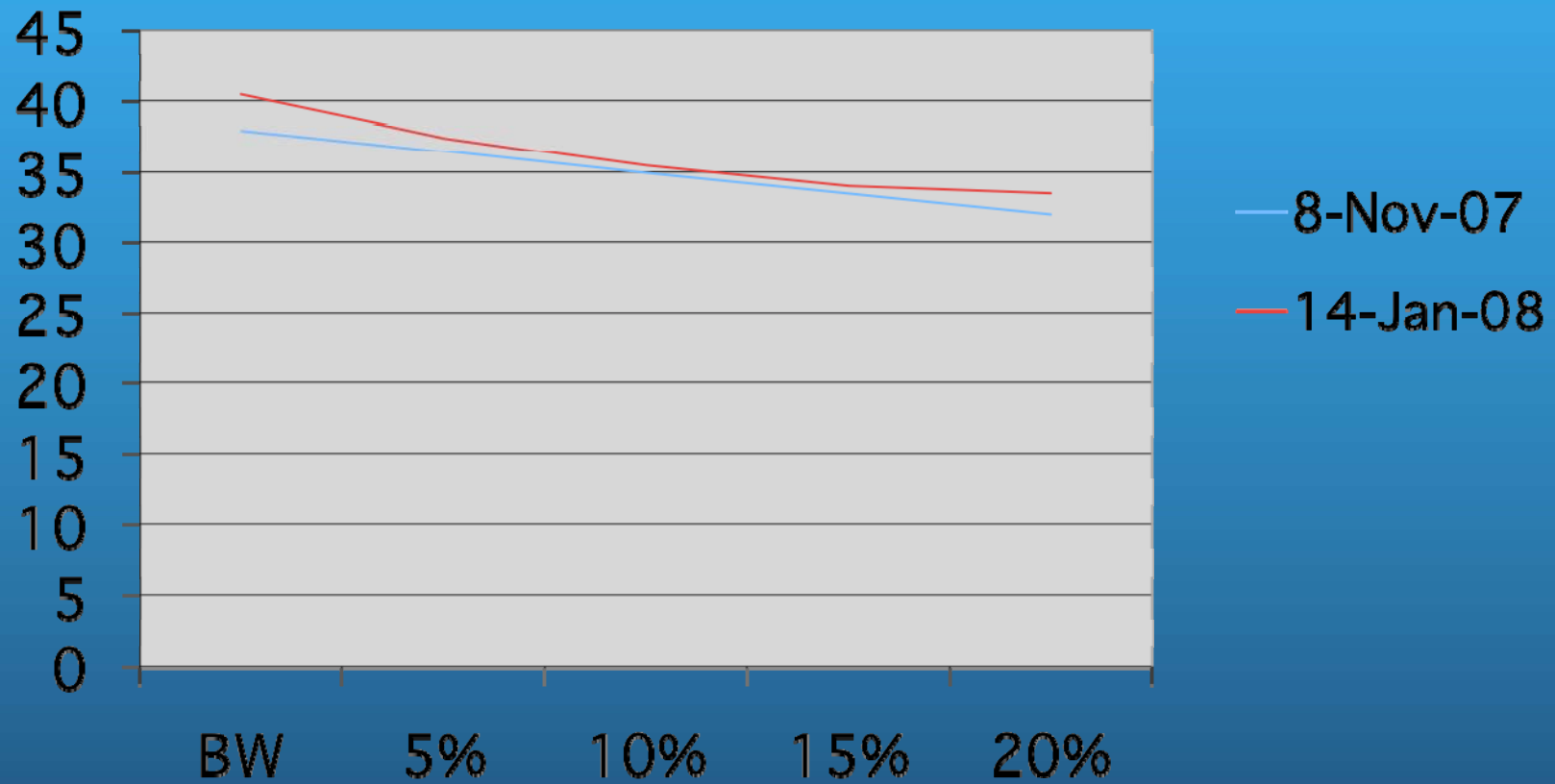
Competition Level	Standing Long Jump (cm)	Standing 3-Jumps (cm)	Standing 5-Jumps (cm)	Overhead Backward (4kg)	Underhand Throw (4kg)	Overhead Forward (2kg)	Overhead Forward (1kg)
40m	220	700	1150	1200	1050	1200	1600
45m	235	740	1200	1350	1200	1300	1800
50m	240	770	1250	1500	1350	1550	2000
55m	250	800	1300	1600	1500	1700	2400
60m	255	830	1350	1700	1600	1800	2600
65m	260	850	1380	1750	1650	1850	2700
70m	265	880	1410	1800	1700	1900	2800
75m	270	900	1420	1850	1750	1950	2900

4kg Throwing Ball Prediction Test for Men's Javelin

- OH Forward throw + OH Backward Throw+ Underhand Forward throw+ 20m = Javelin PR
- Ex: Breaux Greer (2004)
 $18.50\text{m} + 27\text{m} + 22\text{m} + 20\text{m} = 87.50\text{m}$ (87.69m)



Abalakov Test: Koji Murofushi



Javelin Throwing Requirements/Norms

Compiled by: Kari Ihalainen, National Javelin Coach, Korea
Speed & Specific Strength (MEN)

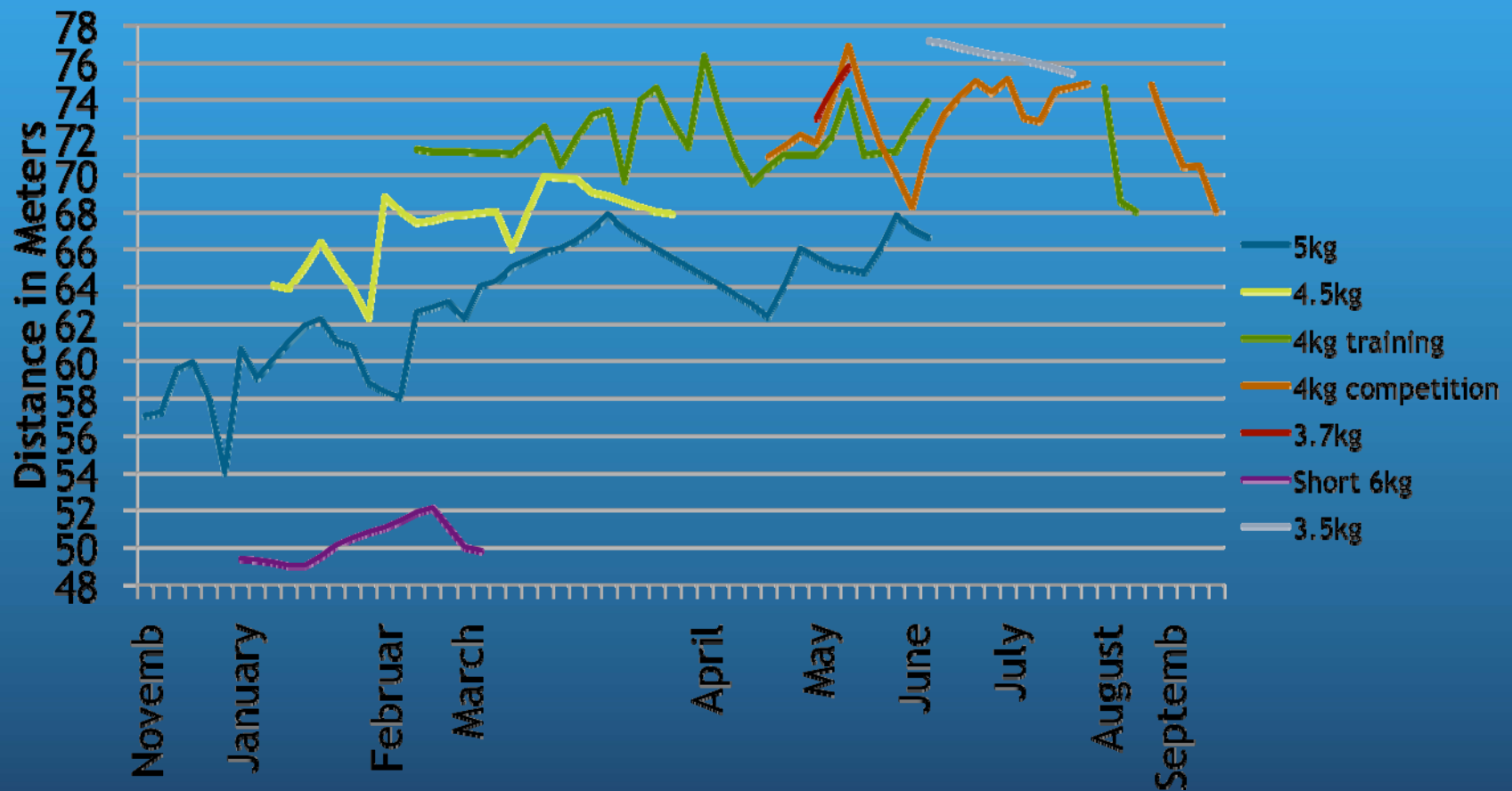
Competition Level	Flying 20m (seconds)	Standing 30m (seconds)	Standthrow Javelin (m)	600g Javelin w/approach (m)	Standthrow 2kg ball (m)	Standthrow 1kg ball (m)
50m	2.32	4.30	35	60	20	30
55m	2.30	4.25	37	65	22	32
60m	2.28	4.20	40	70	25	36
65m	2.26	4.15	46	75	29	40
70m	2.24	4.10	49	80	32	44
75m	2.22	4.05	52	85	36	48
80m	2.20	4.00	55	90	38	52
85m	2.18	3.95	58	95	40	56
90m	2.16	3.90	62	100	42	60
95m	2.14	3.85	65	105	44	64

Javelin Throwing Requirements/Norms

Compiled by: Kari Ihalainen, National Javelin Coach, Korea
Speed & Specific Strength (WOMEN)

Competition Level	Flying 20m (seconds)	Standing 30m (seconds)	Standthrow Javelin (m)	400g Javelin w/approach (m)	Standthrow 1kg ball (m)
40m	2.75	4.80	28	50	22
45m	2.65	4.75	32	55	27
50m	2.55	4.70	35	60	30
55m	2.50	4.65	38	65	34
60m	2.45	4.60	42	70	37
65m	2.40	4.55	45	75	40
70m	2.35	4.50	48	80	43
75m	2.30	4.45	50	85	46

Training Distances for Women's Hammer Throw: Martina Hrasnova 2008-2009 Season



Flexibility

Rotational Shot Put technique with stick across back.

Provides more hip shoulder separation than an actual throw

Allows for many repetitions in a short period of time



Flexibility

Ring Circuit

1) Inversions

2) Skin-the-cat

3) Bird's Nest



Speed

Javelin cross-overs with weighted sled.

Stair Sprints

Hill Sprints

Throwing with light implements

Sprinting drills, sprint starts,
bounding

Agility

Hurdle Mobility circuit

1)Hurdle walk-through

2)180-degree hurdle walk-through

3)Two forward-one back

4)Over-unders

5)Zig-Zag hurdle walk-throughs

6)Zig-zag Over-unders



Mental Preparation

Preparation for practice

Preparation for competition

Preparation for each throw

Have practice competitions

Steve Backley: Lessons I have Learned from BBC Sport, May 8th, 2007

1. *Know your weaknesses-and do something about them:* "The best sportsmen I've met aren't necessarily fantastic at one particular part of the skill-they're just good at everything. I went to train with Olympic javelin champion Jan Zelezny in 1997, in many ways in search of the Holy Grail. I thought there would be something he was doing that would be something he was doing that would just be "it" - the ultimate answer.

But I found if anything, it was that he was good at everything. He didn't have a weakness, because he'd worked on them all.

Most of us tend to do what we are good at, because that's what we enjoy doing. What's actually more important is to find out what we're not good at, and then redress the balance."

Steve Backley: Lessons I have Learned from BBC Sport, May 8th, 2007

2. *Take your chances:* "In any sport, or in life, you have moments when an opportunity opens up in front of you. You have to be ready, and you have to grasp those chances with both hands. At the 1994 European Championships in Helsinki, I wasn't expecting much-maybe just a medal if all went well as much as possible.

But then I looked around after a couple of rounds of competition, and I could see that everyone was struggling. A window was opening.

And I thought, "Right-if you lot don't want it, then I'll have it-I'll drive harder than you, I'll give it a bigger shove." I ended up throwing about 85m, in quite tricky conditions-and winning it by 3 meters.

I remembered that moment for the rest of my career. So if you're thinking, "Should I do the race, or the competition, or play the match?"-well throw yourself in, because you never know which opportunities might arise, and what might happen."

Steve Backley: Lessons I have Learned from BBC Sport, May 8th, 2007

3. *Be prepared*: "I used to write down a list of all the things that could go wrong. People might think-hang on, that's too negative-you have to be positive. And you do. But by having that list, you find solutions to all your potential problems.

What do you do if you're doing your shoes up in the Olympic stadium just before the final starts, and your lace breaks?

Solution: carry spare laces in your kit bag. You could cross that one off your list.

I would spend two weeks coming up with a long list of everything that could possibly go wrong, work through them all and then end up with a long list of solutions.

You would then sit back and think-whatever happens, I've got a plan. And that was a great, great feeling."

Steve Backley: Lessons I have Learned from BBC Sport, May 8th, 2007

4. *Pressure can be your friend*: "People tend to view pressure as a bad thing, but it doesn't have to be. For example, in a training session I'd be delighted to throw 80m or 82m. Three days later in a competition, I'd throw 90m. The pressure of competition was worth a good eight meters.

And if you want to escape from pressure, you can do-no matter how bad the situation might seem.

At my first Olympics, I was genuinely very, very, scared. You've got a billion people watching round the planet, 100,000 in the stadium, the best athletes in the world all in one place-of course you're going to be scared. It's a natural reaction.

So what I did was tell myself that I was simply doing an ordinary throwing session down my local track. That worked for me."

Steve Backley: Lessons I have Learned from BBC Sport, May 8th, 2007

5. *Have a goal:* "This sounds simple, but it's the first part of any journey-decide where you're going to. Only then do you think about how you are going to get there. The outcome I wanted to win whatever the major championship was that year-Europeans, World's or Olympics. I'd then ask what performance would help me achieve that outcome-invariably a throw of 88 or 89 meters would be enough to win.

The next question would be: what's the process that'll bring about that performance? And that's where it starts to get really detailed-on your technique, the strength required, the power output you'll need, the nutritional plan.

All the time, you have to make sure you concentrate on the process, not the outcome-although all anyone will want to talk to you about is the outcome.

Your mates don't want to hear about how your point control is going-they want to know if you're going to win the Olympics, or throw a world record.

What's important is to be able to discuss that outcome with your family, your mates and people who want to glamorize the sport, but be able to focus on the process with the coach and yourself.

Because if you've done the planning right, the outcome should look after itself."

Steve Backley: Lessons I have Learned from BBC Sport, May 8th, 2007

6. *One man's sacrifice is another man's dream:* "The common perception of top sports people is that they have to make huge sacrifices to reach the top. But if you're in pursuit of your dreams, there aren't any sacrifices, because you are doing exactly what you want to do.

If your mates are going down to the pub on a Friday night, but you have to have an early night because you've got to be down at the track early on Saturday morning, that's not a sacrifice.

I certainly never felt I was making a sacrifice, because I was doing exactly what I wanted to do.

And if there ever comes a point when you want to go down to the pub, go down to the pub-because if you resent what you are doing, then you're never going to have enough enthusiasm to do what you're meant to be doing anyway."

Steve Backley: Lessons I have Learned from BBC Sport, May 8th, 2007

7. *Believe in yourself:* "All great sportsmen have three things in common.

First, they all believe in themselves-neither a bad day nor a great day will affect their self-belief.

Second, they're highly motivated, always pushing hard for the next level.

Third, they're naturally talented.

You might think that last factor is the most important of the three, but I don't think it is.

If you look across all sports and ask yourself what their most successful performers have in common, they're all different shapes, different sizes and different personalities, but they all believe in themselves and they are highly motivated."

Steve Backley: Lessons I have Learned from BBC Sport, May 8th, 2007

8. *Success and failure are not black and white concepts:* "I'd gone bronze in Barcelona in 1992, silver in Atlanta in 1996 and I thought-Sydney, the new millennium-it's all there. It had been my dream to throw an Olympic record-and then in the final I did.

But still only came away with the silver, because Jan Zelezny went straight out and broke my Olympic record by just 32 centimeters.

People say to me, "That must have been devastating." But sometimes you can't have any bearing on a result. For me it was all about whether you delivered or not-whether you did everything you planned to do and did as well as you could possibly do.

If you can say to yourself after a competition that you did-as I could after that final-then whether you came first or last doesn't really matter"

Steve Backley: Lessons I have Learned from BBC Sport, May 8th, 2007

9. *Keep changing-whether you win or lose:* "Successful sports people keep re-inventing themselves. Whether you win or lose, you always need to get up to a new level-and you can't do that if you're always doing the same old thing.

At the end of every season, I would make an assessment of how the season went. You'd then draw up a new plan, and work out what changes you had to make based on what went right and what went wrong.

For example, at the end of the 1997 season I decided to join the Eastern European coaching system. By doing that, I learned a completely new way of doing things, and that gave me more armoury, more things to fall back on.

Get advice from other people. And be creative, particularly if you've been doing one thing for a long time.

By the time I finished athletics, we were doing all sorts of weird and wonderful things in training, just to stay interested."

Steve Backley: Lessons I have Learned from BBC Sport, May 8th, 2007

10. *Don't get injured*: "It sounds obvious, but it'd true: If you're injured, you can't win anything.

And injury isn't necessarily something that you have no control over-there are ways to make sure it doesn't happen to you.

Go to see a physiotherapist. Get them to assess your physical strengths and weaknesses. Then do the exercises that will protect the areas you'll stress doing your sport.

For me in the javelin, it was my shoulder, back and hips that I had to think about, so I had to make sure I did the 'prehab' to strengthen and protect those areas, and keep me healthy."