

Shoulder Presentation

Dr. Jim Miller, MD

Shoulders are very prone to injury due to constant extreme extension
60-85% of swimmers will have an issue with shoulders that will cause them to miss at least a week of swimming
90% of swimming propulsion is derived from shoulders

Shoulder make-up

- Static - 5 different joints contribute to the shoulder
- Static - ligaments
- Static - glenoid labrum – a cartilage-like structure, serving a purpose to the shoulder much like the meniscus does to the knee
- Dynamic – intrinsic and extrinsic muscles – intrinsic includes the rotator cuff and is underneath/inside the extrinsic muscles
- Scapular – bone in back that links your shoulder to your core.

Contributing factors to Stroke Vulnerability

As you tire, stroke breaks down. Muscle groups fail, and the shoulder becomes more exposed as muscles cease to contain the shoulder closer to the core

Stroke technique

Genetics and other individual biological factors:

Sudden changes in training – ie SCY to LCM; erratic training

Trauma

Nutrition

Sleep

Impact of illness

Medical management of injuries

Is all stretching good? NO!!!

- Bad: wall stretch, hand behind back, arm across body
- 90degree arm stretch
- moo's stretch

What do we, as swimmers, need – tightening, linking and stabilizing – not “stretching” which destabilizes our shoulders

prevention –

attend to the basics – technique, sleep, nutrition

dryland prevention – correct stretching

core stability

train opposing muscle groups

if you have down time due to illness or something, maintain activity and/or keep upkeep
shoulder stability

good stretches –

Dead bug; advanced dead bug

Isolated shrug

Hitchhiker – lie face down on a mat, arms out and thumbs up

Work the rotator cuff - Ball-on-the-wall; Water bottle shaker
band stretch

Impact of the aging process on the shoulders – is there a link?

- masters have increased number of strokes per 50m
- anatomy changes – changes in body comp, vascular changes, pulmonary changes, muscles change, etc...
- longer period of recovery

Go to a doctor sympathetic to ATHLETES!!!

Make sure medications are not robbing your body's ability to recover

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Better Streamline – activate your core

Re: drugs: how do you know the drugs you take are not bad? Avoid Liver-Active drugs!

Shoulder surgery – alternatives to 2nd surgery after repeat of injury:

injection of sugar water is helping recovery;

acupuncture

work hard at core linkage

Arthritis – find out what TYPE of arthritis it is; if it involves the bone itself, it will change the bones that stabilize the shoulder. If it is osteoarthritis, that affects the ligaments that link everything together. Glucosamine Sulfate – only proven thing that improves lubrication of the joints

Electro-stimulation for warm-up/warm-down – it works for warming up the tissue, but it is not sequential firing of muscles – it is not warming up muscles in the same way as actually doing the motion

Different stretches for warm up and warm down – a meet is the ideal place to warm up: stretch, swim, stretch, swim again, race, stretch and cool down

If you feel stretching of the joint = bad (anything shifting or sliding) – if you feel stretching the muscle – good

Does a hot tub/sauna help warm up muscles? Yes.

Jim Miller recommends a good technique-focused warm-up, followed by stretching afterwards

Different stroke effect on shoulders – the less efficient your stroke is, the more stress you place on the shoulders