



# NUTRITION & INJURY PREVENTION WORKSHOP

 **SOUTH32**  
**ROTTNEST**  
**CHANNEL SWIM**  
**2024**





# *Acknowledgement of Country*

*2024 South32 Rottnest Channel Swim*





ROTTNEST IS



ENGINE

VENUES WEST





# *Josh McCleery*

*RCSA Executive Officer*

**2024 South32 Rottnest Channel Swim**





# ***Rottnest Channel Swim Association***

## **VOLUNTEER BOARD**

- ❖ **President:** Kirsty Bellombra
- ❖ **Vice-President:** Will Rollo
- ❖ **Board Directors:** Shane Cartwright (Financial Controller), Rob Herkes, Emily Randall, Alice Dormer, Giorgia Beasley.

## **STAFF MEMBERS**

- ❖ **Executive Officer:** Joshua McCleery
- ❖ **Event Officer:** JC / Josh Chapman
- ❖ **Admin & Marketing Coordinator:** Caitlin Crowley

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Phone: (08) 6555 3970.

***2024 South32 Rottnest Channel Swim***





# Agenda



- ❖ **2023 HIGHLIGHTS VIDEO**
- ❖ **DR KIRSTY BELLOMBRA** – Injury Prevention and Management
- ❖ **DR ROSLYN GIGLIA** – Nutrition
- ❖ **LUNCH BREAK** – 30 minutes
- ❖ **DR NAT BENJANUVATRA AND DR GRANT LANDERS, FROM UWA** – Hypothermia & Pulmonary Oedema
- ❖ **DR TRAVIS FALCONER** – Shoulder Study
- ❖ **JULIAN MILLS** – Training and Nutrition







# *Dr Kirsty Bellombra*

*BSc (Chiro), BChiro, ICSC Sports Chiropractor*

*Injury Prevention*

*2024 South32 Rottnest Channel Swim*





# Welcome

- President of Rottnest Channel Swim Association
- Committee member for AICE Sport and Exercise
- Commission Chair for FICS
- Sports Chiropractor
- 5 x RSC solo crossings



# AICE Sport and Exercise

**AICE Sport and Exercise** is Australia's national organisation for sports chiropractic and is a not-for-profit, clinical interest group of the Australian Chiropractors Association.

We help to coordinate sports chiropractic treatment at community, state and national level sporting events. We use a combination of different modalities in our treatment including soft tissue therapy (massage), joint mobilisation/manipulation, stretching, strengthening, dry needling, rehabilitation and lifestyle/performance advice.



**SPORTS &  
EXERCISE**

**AICE Sport and Exercise will be on the finish line proving  
complimentary post race care to all swimmers.**

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# Demographic



**2024 South32 Rottnest Channel Swim**





# Overview



- What injuries can occur
- How they occur
- How to prevent them



# Injury Types

- Acute injury vs **chronic injury**
- Chronic injury = accumulation of small repetitive loads placed on the body that the body is not adequately conditioned for.

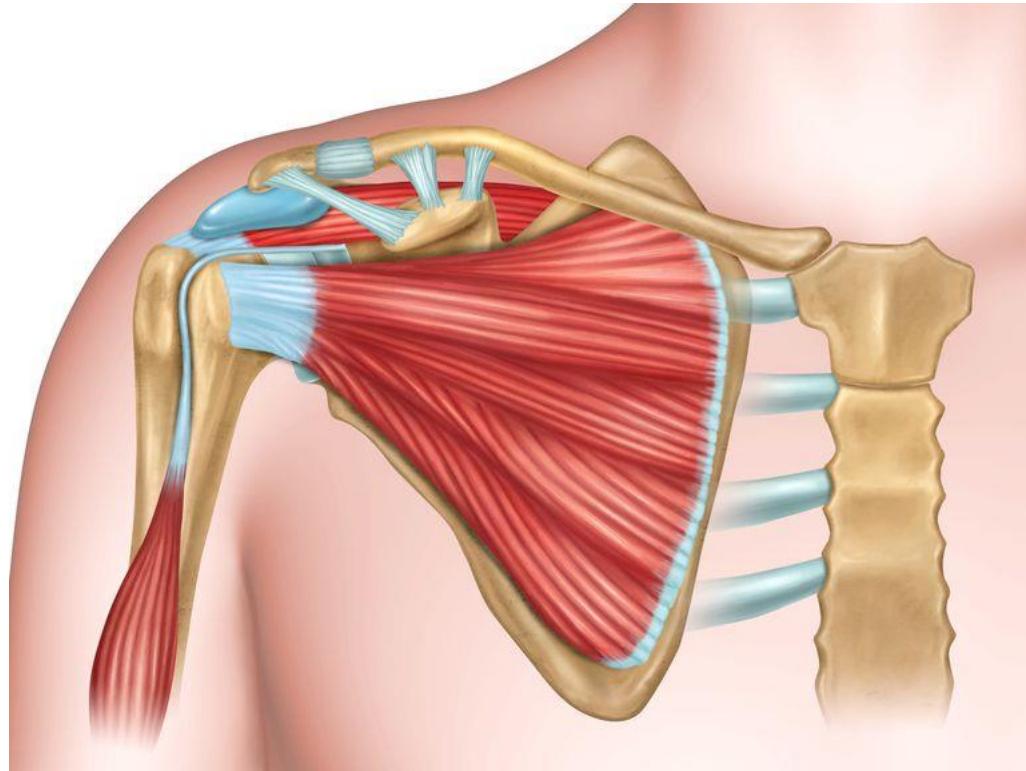


# Common Injuries in Open Water

- Shoulder, neck, low back, ankles
- Shoulders are by far the most common in distance swimming



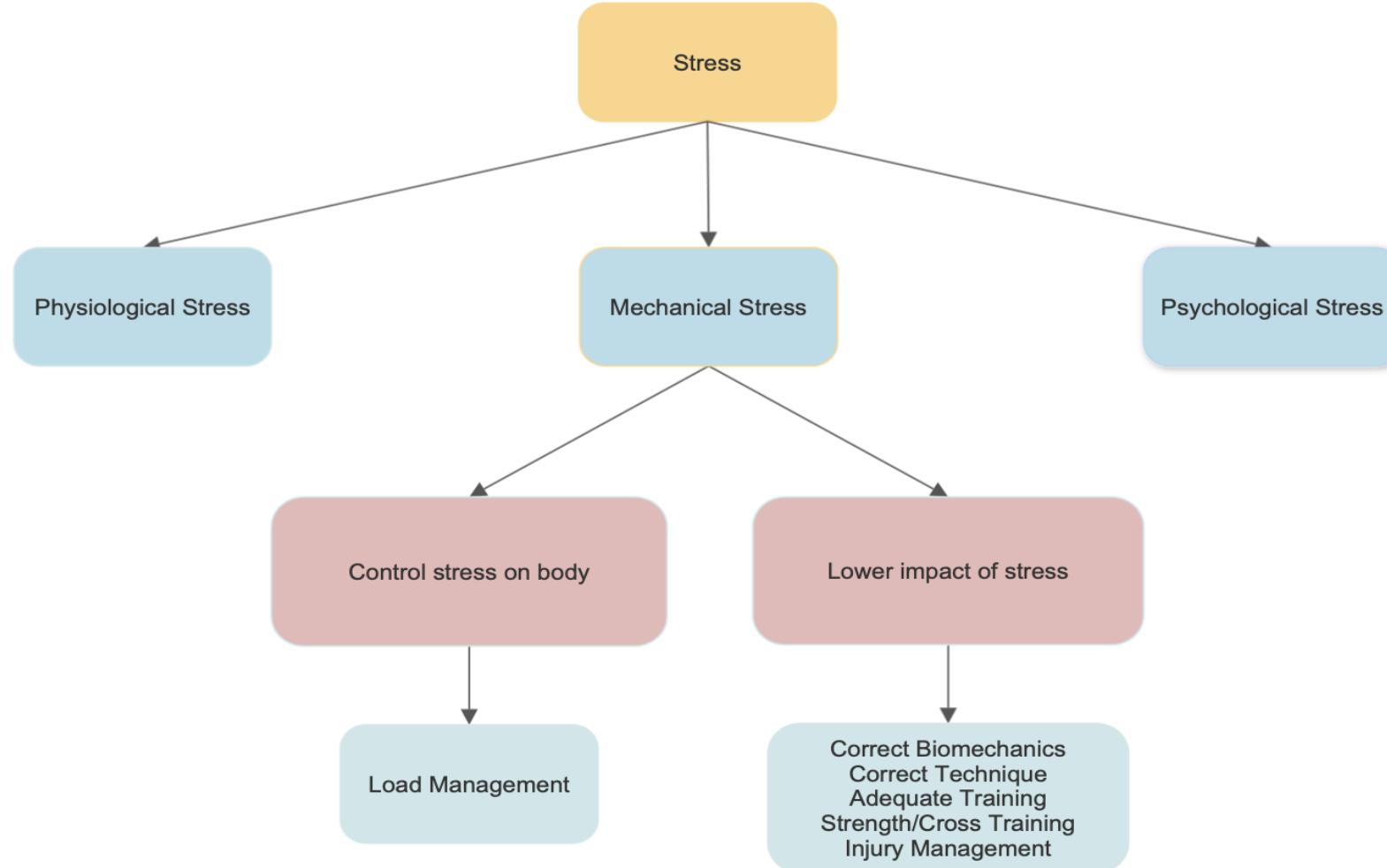
# Shoulder Injuries



- Up to 90% of swimmers will suffer shoulder pain
- Shoulder is inherently an unstable joint with complex anatomy
- Most common injury is Swimmer's Shoulder



# Causes of Injury





# Areas of Injury Prevention

1. Load management
2. Correcting biomechanics
3. Correcting technique
4. Adequate training
5. Strength/cross training
6. Injury management



# 1. Load Management

Slowly and progressively increase our load as to not overload the body

Acute/Chronic Workload Ratio  
=

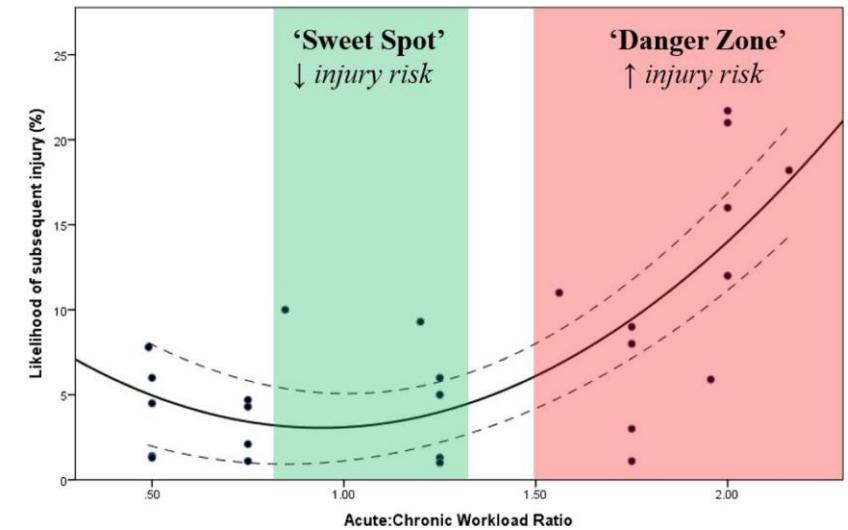
Acute Training Load / Chronic Training Load

<0.8 = deconditioning

0.8 – 1 = rest

1 – 1.3 = 'sweet spot'

>1.5 = overload



Gabbett TJ. The training–injury prevention paradox: should athletes be training smarter *and* harder?  
*British Journal of Sports Medicine* 2016



# 1. Load Management

Example:

Acute training load 12km (week 5)

Chronic training load 6km (week 1-4)

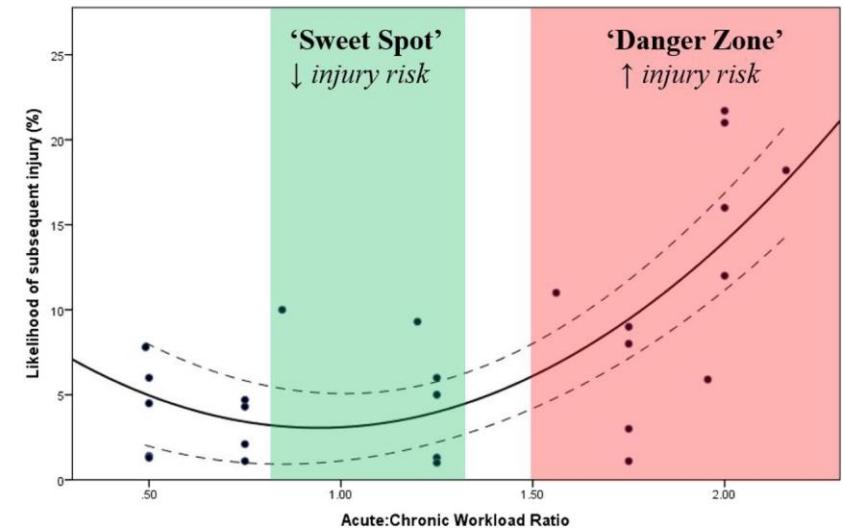
$$12 / 6 = 2 \text{ (ACWR)}$$

$<0.8$  = deconditioning

$0.8 - 1$  = rest

$1 - 1.3$  = 'sweet spot'

$>1.5$  = overload



Gabbett TJ. The training—injury prevention paradox: should athletes be training smarter *and* harder?  
*British Journal of Sports Medicine* 2016



## 2. Correct Biomechanics

- Biomechanics is how our body functions
- Issues we may encounter as swimmers:
  - Loss of range of motion
  - Instability, hypermobility, laxity
  - Scapular position
  - Altered muscle patterns (tightness/weakness)
  - Strength imbalance
  - Limited thoracic mobility
- See your medical professional



## 3. Correct Technique

Importance of good technique:

- 45 strokes per 50m, 15 breaths
- Average training session (4km) = 3600 strokes, 1200 breaths
- Event day (19.7km) = 17 730 strokes, 5 910 breaths



## 3. Correct Technique

Some areas to focus on include:

- Hand entry (neutral, not crossing midline)
- Elbow position on pull (high elbow)
- Head position (not too high, not too low)
- Pull phase (incomplete pull reduces efficiency, increases stroke rate)
- Body rotation (body roll to ensure less pressure on shoulders)
- Breathing (bilateral breathing to share load on neck and shoulders)



## 4. Adequate Training

- Ensure you train in all conditions
- Ocean vs pool
- Poor conditions place very different stress on the body





## 5. Strength/Cross Training

- Benefits of strength/cross training:
- Active recovery
- Fitness
- Mental health
- Rehabilitation



## 5. Strength/Cross Training

- Ideas:
  - Water walking/running/different strokes
  - Gym/strength-based workouts
  - Running
  - Yoga
  - Pilates



## 6. Injury Management

- Please ensure you seek help if you have an injury or pain.
- The faster you seek help when pain or injury occurs, the better the prognosis
- Talk to me after if you need to be pointed in the right direction



# Summary

## 1. Load management

Increase load appropriately and factor in recovery. Have a plan but listen to your body

## 2. Correct body biomechanics

How our body functions, have an assessment by a medical professional

## 3. Stroke correction

Bilateral breathing, correct hand entry, adequate body roll, complete pull

## 4. Adequate training

Train in all weather conditions and temperatures to ensure you are both mentally and physically prepared

## 5. Strength/cross training

Active recovery, fitness, mental status, rehabilitation

## 6. Injury management

Have injury assessed and managed by professional



# *Any Questions?*

[president@rottnestchannelswim.com.au](mailto:president@rottnestchannelswim.com.au)



# *Dr Roslyn Giglia*

*Dietitian, Nutritionist (PhD, MPH, GradDipDiet, BAppSc, AdvAPD)*

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*View Dr Roslyn Giglia's  
handouts*

[rottnestchannelswim.com.au/dr-roslyn-giglia-handouts](http://rottnestchannelswim.com.au/dr-roslyn-giglia-handouts)



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