



# PHYSIOTHERAPY SCREENING SUMMARY

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physiohealth



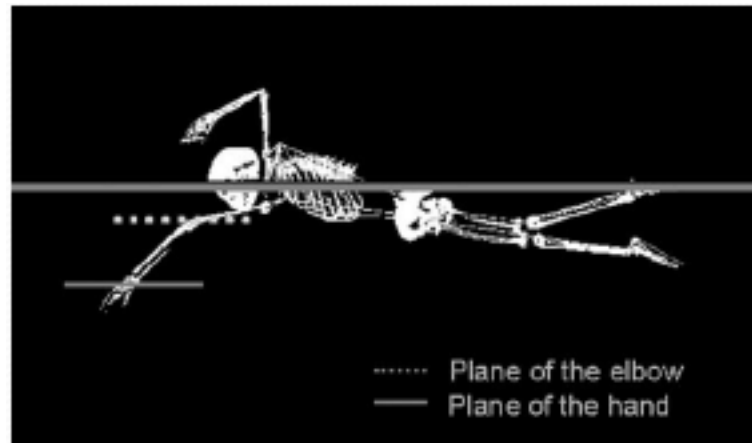
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# WHY SCREEN?

Identify specific range of motion important for swimming



Injury Prevention = Performance enhancement (Blanch 2004)

# HYPERMOBILE SWIMMER

More joint range of motion

Improved catch position

Require greater muscle strength and control



# STIFF BUT STRONG SWIMMERS

Poor mobility and flexibility

Adopt compensation strategies to gain range

Strong and Powerful – stable base





# RESULTS

	Abduction Humeral Angle		Combined ext	Shoulder External Rotation		Shoulder Internal Rotation		Hip Flexor Angle		Hamstring Femoral Angle		Hip Internal Rotation		Ankle Plantar Flexion		Trunk Rotation	
	Right	Left		Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left
Girls	152.0	152.5	-3.4	49.3	41.6	10.9	17.5	-5.0	-7.0	102.0	101.1	45.0	45.5	169.5	170.5	64.8	65.5
Boys	133.5	135.3	-7.8	100.5	99.3	32.3	37.3	1.8	2.3	74.0	74.5	37.8	40.3	167.5	165.0	75.8	77.8

# ABDUCTION/IR

	Right	Left
Girls	152.0	152.5
Boys	133.5	135.3

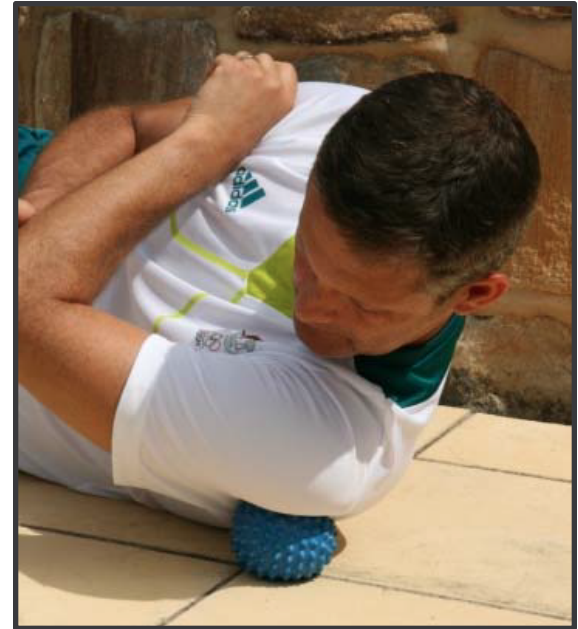
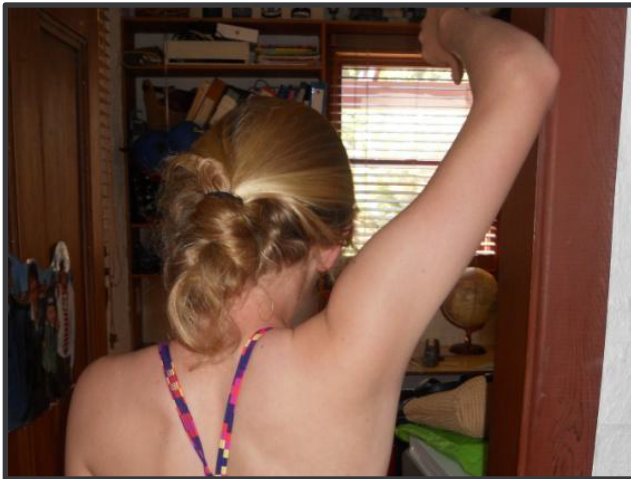
- Ideal > 170
- Acceptable but needs work 150-170

- Important for a high elbow and effective strong catch on the water



# IMPROVING ABDUCTION/IR

- Trigger Points
- Stretching
- Soft tissue Release
  - **lats**
  - **posterior cuff**
  - **teres**



# COMBINED EXTENSION AND ELEVATION

Important for streamline, catch  
and body position in water  
> 10 deg = Ideal

0-10 deg = needs work  
EFFICIENCY

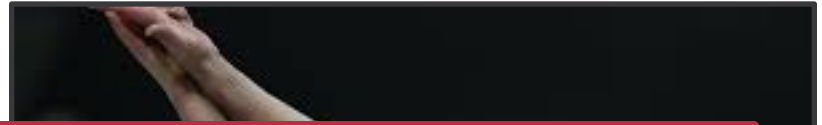
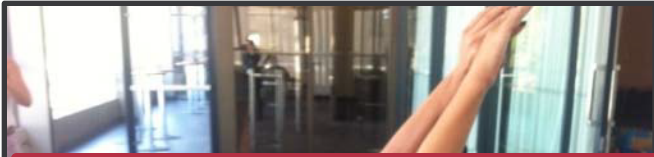
	Combined ext
Girls	-3.4
Boys	-7.8







# IMPROVING COMBINED EXTENSION



## FOAM ROLLER



# INTERNAL ROTATION

	Shoulder Internal Rotation	
	Right	Left
Girls	10.9	17.5
Boys	32.3	37.3

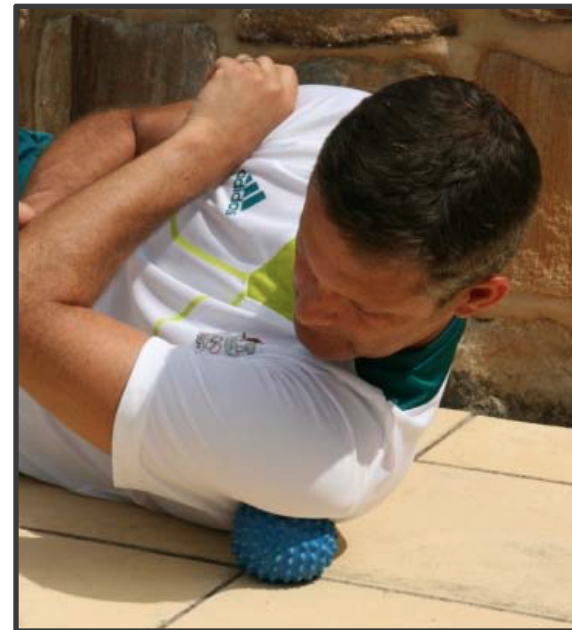
- > 45 = ideal
- 30-45 = needs work

Important to achieve an early catch and maintain high elbow



# IMPROVING INTERNAL ROTATION

- Trigger Point / release Post Cuff
- Sleeper Stretch





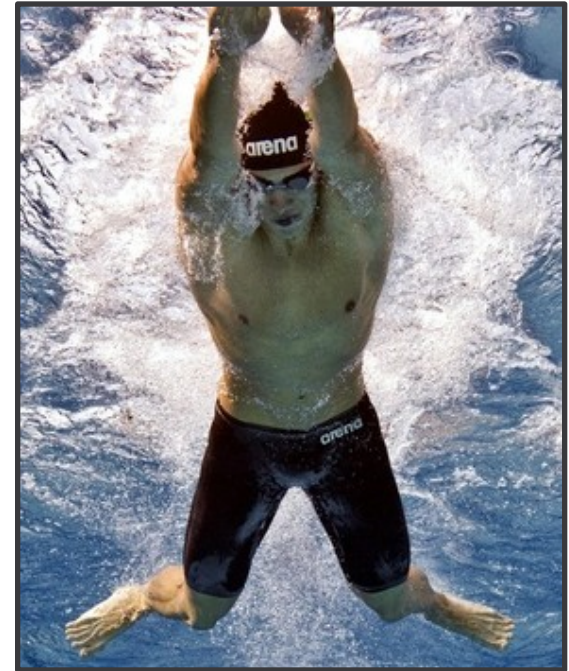
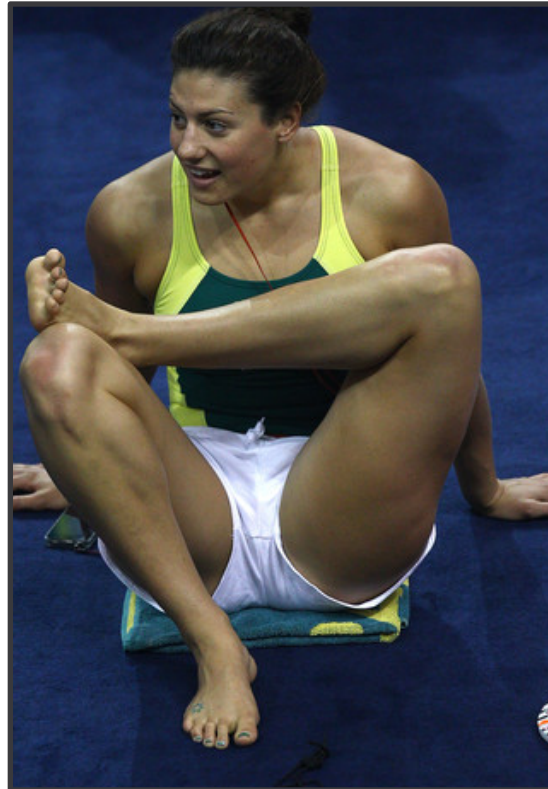
# HIPS AND LOWER LIMB

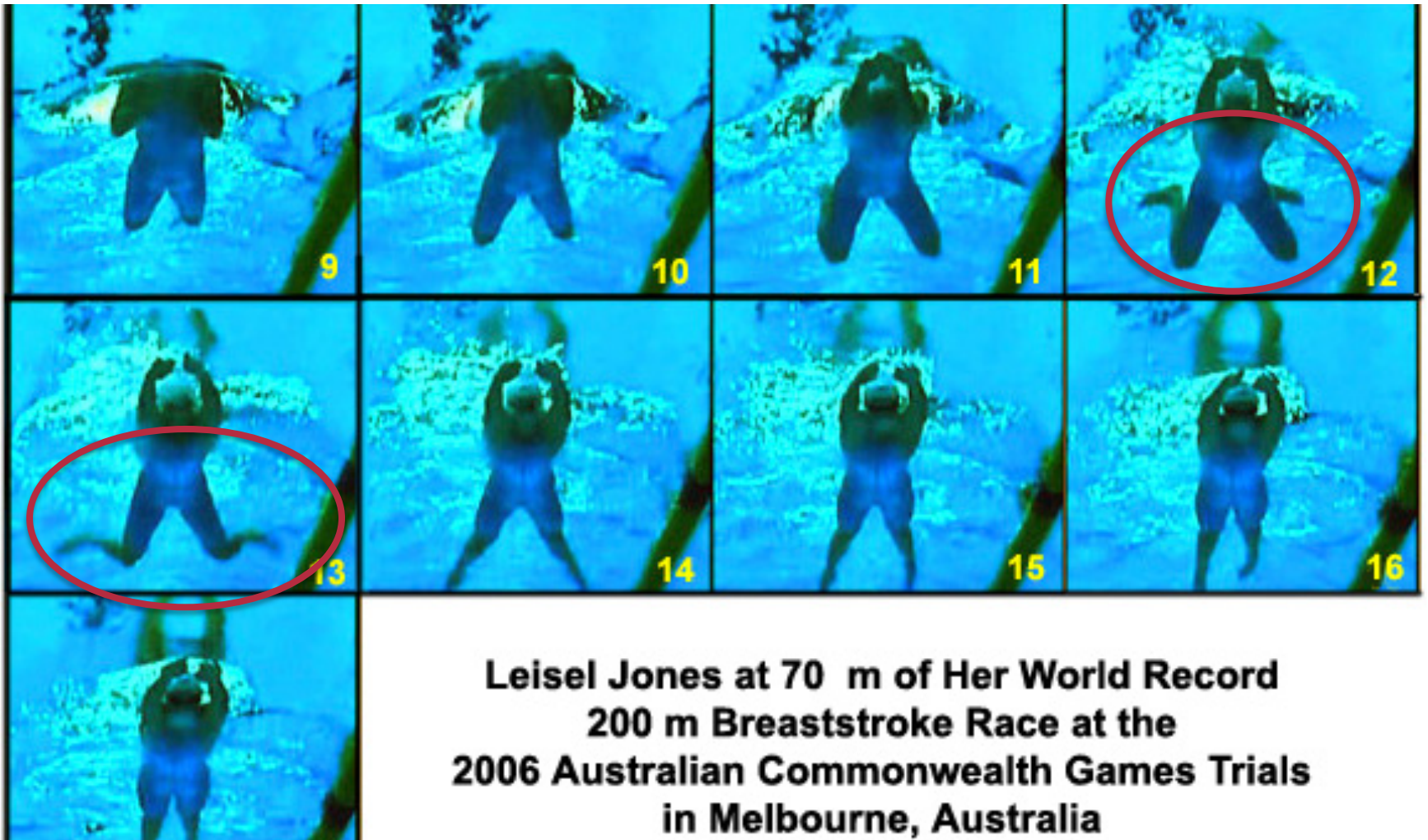
	Hip Flexor Angle		Hamstring Femoral Angle		Hip Internal Rotation		Ankle Plantar Flexion	
	Right	Left	Right	Left	Right	Left	Right	Left
Girls	-5.0	-7.0	102.0	101.1	45.0	45.5	169.5	170.5
Boys	1.8	2.3	74.0	74.5	37.8	40.3	167.5	165.0



# BREASTSTROKE

- Hip Internal Rotation important for an efficient kick
- Main limiting factor is tight glutes





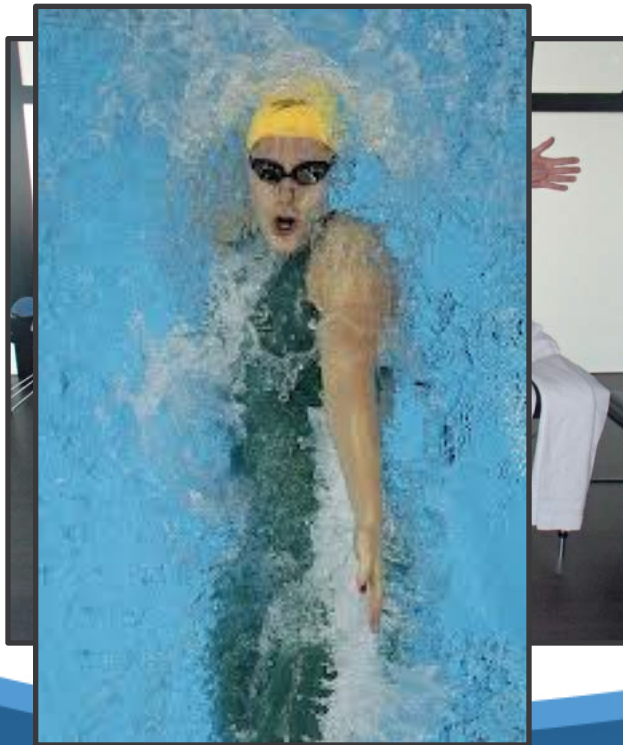


# THORASIC ROTATION

	Trunk Rotation	
	Right	Left
Girls	64.8	65.5
Boys	75.8	77.8

Ideal = >80

Needs improvement = 70-80



- Most important indicator of increased risk of injury
- Significantly impacts upon body position and catch in the water

# IMPROVING THORASIC ROTATION

Joint/ soft tissue mobilisation  
Home mobilisation exercises

- Bows and arrows
- Windmills
- Broomstick rotations







# QUESTIONS

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♥ 92 likes

bindyhocking I love my physio day at @physiohealth  
Thanks @cara\_lee for being an awesome physio!  
#ilovemyphysio #somethingalways hurts



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