

## **DIVE STARTS DRILL PROGRESSION FRAMEWORK**

### **Part 1: Land Mobilisation and Activation: How to use this Document**

In this document you will find a load of information to assist you in delivering effective Pre-Pool focused towards supporting Dive Starts. These have been developed and separated to support the different phases of the Dive, as referred to in the Drill Progression Framework. See the table below for the relevant sections:

SECTION	DESCRIPTION	PAGE NUMBER
<b>Part 1a</b>	Mobility and Activation for SET-UP Phase	2
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<b>Part 1c</b>	Mobility and Activation for FLIGHT & ENTRY Phase	3
<b>Part 1d</b>	Structuring a Pre-Pool	5
<b>Part 1e</b>	Example Pre-Pool Flow	(Separate document)

You will find descriptions and examples in each section, accompanied by a YouTube link for demonstration. Each section will provide a list of exercises that can be used as part of the drill progression framework to help improve the mobility, activation and coordination of the swimmer. These exercises, completed frequently as part a swimmer Pre Pool routine, will increase the capacity of the swimmer to adopt better positions and improve movement quality within the Set-Up, Drive and Flight Phase of the track start dive.

## **DIVE STARTS DRILL PROGRESSION FRAMEWORK**

### **Part 1a: Land Mobilisation and Activation: Set-Up Phase**

The exercises that comprise the Set Up (*Table 1*), largely encompass mobility as a focus. This is due to the unique postural demands that swimmer is required to adopt when setting up for the dive. Mobility should be primary focus within the Pre Pool routine. If the swimmer is unable to comfortably adopt the Set-Up position when on the blocks, the swimmer's capacity to maximise their power production of the block, will be compromised.

		EXERCISE	FOCUS OF EXERCISE
SET UP	MOBILITY	THREAD THE NEEDLE	THORACIC SPINE AND SHOULDER GIRDLE
		CAT & COW POSE	THORACIC & LUMBAR SPINE
		PANCAKE POSE	THORACIC, LUMBAR SPINE, GLUTES AND HAMSTRINGS
		LYING BAND / TOWEL HAMSTRING STRETCH	GLUTES AND HAMSTRINGS
		PIGEON POSE	GLUTES
	ACTIVATION	PSOAS MARCH	HIP FLEXORS
VIDEO HYPERLINK			<a href="https://www.youtube.com/watch?v=53mBO7bugdY">https://www.youtube.com/watch?v=53mBO7bugdY</a>

*Table 1*

## **DIVE STARTS DRILL PROGRESSION FRAMEWORK**

### **Part 1b: Land Mobilisation and Activation: Drive Phase**

In contrast to the Set Up, the Drive Phase comprises exercises that are considered activation exercises. These exercises are listed in the table below (*Table 2*) and are suitable for developing both strength and power. Unlike The Set Up & Flight Phase, the Drive Phase requires exercises to be completed that have a higher degree of complexity. For this reason, the exercises have been divided into categories that reflect the complexity or intensity of the exercise. *Level 0* lists a category of exercises that are low velocity, stable and comprise low complexity. All age group swimmers should begin at this stage. *Level 1* comprise exercises that introduce complexity through balance and velocity. This is achieved through the introduction of single leg movement patterns and low level jumping and landing skills. *Level 2* demonstrates exercises of higher complexity and intensity. When developing a Pre Pool routine, the jumping exercises within *Level 1* and *Level 2*, are suitable movements to be included as part of the PRIME element of the warm-up model.

DRIVE PHASE	ACTIVATION LOWER	LEVEL 0	
		BAND QUAT	TRUNK, QUADS, GLUTES & HAMSTRINGS
		SPLIT SQUAT	TRUNK, QUADS, GLUTES & HAMSTRINGS
		BAND GLUTE CLAMS	GLUTES, MUSCULATURE OF THE LATERAL HIP & HAMSTRINGS
		LATERAL MONSTER WALK	GLUTES & MUSCULATURE OF THE LATERAL HIP
		SINGLE LEG GLUTE BRIDGE PSOS MARCH	GLUTES, HAMSTRINGS & HIP FLEXORS
		LEVEL 1	
		BOX STEP DOWN	TRUNK, QUADS, GLUTES & HAMSTRINGS
		ARABESQUE	TRUNK, GLUTES, MUSCULATURE OF THE LATERAL HIP & HAMSTRINGS
		BULGARIAN SPLIT SQUAT	TRUNK, QUADS, GLUTES & HAMSTRINGS
		DEPTH DROP	TRUNK, QUADS, GLUTES & DEVELOP LANDING MECHANICS SKILL
		COUNTER MOVEMENT JUMP	TRUNK, QUADS, GLUTES & DEVELOP JUMPING MECHANICS SKILL
		LEVEL 2	
		RECTIVE SQUAT JUMP	TRUNK, QUADS, GLUTES & DEVELOP JUMPING MECHANICS SKILL
		BOX JUMP	TRUNK, QUADS, GLUTES & DEVELOP JUMPING MECHANICS SKILL
	SINGLE LEG HOP & STICK	TRUNK, QUADS, GLUTES & DEVELOP JUMPING MECHANICS SKILL	
	ACTIVATION UPPER	SINGLE ARM KNEELING LAT PULLDOWN	TRUNK, MUSCULATURE OF THE ARM, SHOULDER & LATS
		SINGLE ARM BAND ROW	TRUNK, MUSCULATURE OF THE ARM, SHOULDER & LATS
		SUPINE ROW	TRUNK, MUSCULATURE OF THE ARM, SHOULDER & LATS
VIDEO HYPERLINK			<a href="https://www.youtube.com/watch?v=8rINUOX2le8">https://www.youtube.com/watch?v=8rINUOX2le8</a>

Table 2

## DIVE STARTS DRILL PROGRESSION FRAMEWORK

### Part 1c: Land Mobilisation and Activation: Flight & Entry Phase

The exercises listed in Table 3 that underpin the Flight & Entry Phase. Cover a range of mobility and activation exercises, which look to develop the core and overhead position. These areas of focus are required to optimise the streamline positions adopted in the air and during the entry of the water, where drag forces become a factor in slowing the swimmer down.

FLIGHT & ENTRY PHASE	MOBILITY	WALL PEC STRETCH	PEC & MUSCULATURE AROUND THE SHOULDER
		BAND PEC STRETCH	PEC & MUSCULATURE AROUND THE SHOULDER
		BENT OVER LAT STRETCH	LAT & MUSCULATURE AROUND THE SHOULDER
		BAND BENT OVER LAT STETCH	LAT & MUSCULATURE AROUND THE SHOULDER
		SLEEPER STRETCH	ROTATOR CUFF
		STICK BULLY STRETCH	ROTATOR CUFF
	ACTIVATION	BLACKBURNS	MUSCULATURE OF THE ROTATOR CUFF, SHOULDER & UPPER BACK
		HITCHHIKERS	MUSCULATURE OF THE ROTATOR CUFF, SHOULDER & UPPER BACK
		PRESS UP POSITION SHOULDER TAP	TRUNK, SHOULDER & UPPER BACK
		BAND PALLOF PRESS	TRUNK, SHOULDER & UPPER BACK
		HOLLOW BODY HOLD	TRUNK
		BIRD DOG HOLD	TRUNK, SHOULDER, GLUTES & HAMSTRINGS
		STREAMLINE HOLD	TRUNK, SHOULDER, GLUTES & HAMSTRINGS
VIDEO HYPERLINK		<a href="https://www.youtube.com/watch?v=l1kkyVullaQ">https://www.youtube.com/watch?v=l1kkyVullaQ</a>	

Table 3

## DIVE STARTS DRILL PROGRESSION FRAMEWORK

### Part 1d: Land Mobilisation and Activation: Structuring a Pre-Pool Routine

The program below (*Table 4*) is an example of how the exercises listed above in the Set-Up, Drive and Flight Phase exercise selection can be used for structuring a Pre Pool routine. The RMAP warm-up model has been used to structure the program. RMAP is an acronym for R – Release, M – Mobilize, A – Activate and P – Prime.

<b>RELEASE</b>	THORACIC SMASH (FOAM ROLLER)	THORACIC SPINE	1 Set x 60 Sec
<b>MOBILIZE</b>	THREAD THE NEEDLE	THORACIC SPINE	2 Sets x 30 Sec
	CAT & COW POSE	THORACIC & LUMBAR SPINE	1 Set x 40 Sec
	BENT OVER LAT STRETCH	LAT & SHOULDER	2 Sets x 40 Sec
	SHOULDER ROLL	PEC & SHOULDER	2 Sets x 30 Sec
	SLEEPER STRETCH	ROTATOR CUFF	2 Sets x 20 Sec
	WALL HIP FLEXOR STRETCH	HIP FLEXOR & QUAD	2 Sets x 40 Sec
<b>ACTIVATE</b>	GLUTE BRIDGE ABDUCTOR BRACE	GLUTES & HAMSTRINGS	2 Sets x 15 Reps
	LATERAL MONSTER WALK	GLUTES & MUSCLES OF LATERAL HIP	2 Sets x 10 Reps
	BAND SQUAT	TRUNK, GLUTES, QUADS & HAMSTRINGS	2 Sets x 10 Reps
	BAND SINGLE ARM ROW	ARM, SHOULDER AND LATS	2 Sets x 15 Reps
<b>PRIME</b>	Counter Movement Jump	TRUNK, QUADS, GLUTES & JUMP MECHANICS SKILL	2 Sets x 6 Reps

Table 4