FutureDreams

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Last month we talked about the importance of the primary swimming fault that people display – that of incorrect body position, a problem with balance in the water that leads to both drag & unnecessary tension. You will now have a better understanding of how your head position affects both your feeling of relaxation and your efficiency in the water

The 2nd fault which this article continues with, deals with shoulder extension & rotation (reach & roll). As with most swimming problems, extension will relate back to the concept of balance because as your reach further into the water you will automatically begin to rotate more to the side. If your balance is not good, then neither will your rotation and extension be, as your body will fight the roll due to an uncomfortable unbalanced feeling. Extension is also dependent on another major factor, that of flexibility, something simple but which we all consider seriously. Read on to see how these problems can be overcome.

SHOULDER EXTENSION & DPS
Swimming fast is a product of 2 main forces –
1. Maximising Propulsion – every armstroke results in forward momentum.
2. Minimising Drag - staying streamlined AS you create that propulsion

Staying streamlined to minimise drag (#2) is essentially an issue relating to balance through correct body position, and this concept has been dealt with our first part to this article (please refer to last month). However, to generate effective forward propulsion (#1) is a different story and here's the short & skinny on "why" -

MOST SWIMMERS EITHER NEGLECT TO, OR PHYSICALLY CANNOT, EXTEND THEIR ARMS FORWARD LONG ENOUGH TO INITIATE AN EFFECTIVE PULLING ACTION

You can instantly tell how much water someone is pulling if you simply count the number of strokes that a swimmer is taking per length. Obviously the fewer strokes taken, the more distance per stroke that swimmer is obtaining from each pull. "DPS" is a common term amongst swimmers and non-swimmers alike that effectively describes the extent of a swimmer's reach. Even though this is an easy concept to understand, it is much harder to put into practise. To hear this will be especially frustrating for the weaker swimmers among us that see how "easy" it looks for a good swimmer to obtain this desired long distance per stroke. The reason why effective

swimmers have a good DPS is that they have the ability to hyper-extend their shoulders allowing the hands to stretch longer and straighter. This increases the glide phase and potential to pull more water but also by keeping the swimmer longer and straighter it reduces drag as they glide forward effortlessly.

BIOMECHANICS OF THE PULL AND RECOVERY PHASES
If we have a look at the biomechanics of the shoulder action in swimming we realise that if you add the width of a swimmers shoulders to the pulling equation you are gong to pull more water given that you actually can utilise them fluently.

As an experiment, stand with your body front-on to a mirror with both arms reaching out in front of you as far as they will stretch. Now, begin to move your arms through a swim-stroking pattern but try to keep your body aligned straight with the mirror, ie without turning. You will find this limits the degree to which you can reach your arms forward with each imaginary stroke. Now by doing this we can experience on dry land what many swimmers experience in the pool when stroking. Obviously this experiment IS an exaggeration and no one will actually swim without moving their shoulders at least a small amount, but in reality many people are closer to this than you realise. The problem with lack of movement, as we have just been made fully aware of, is that "body roll" is imperative if you want to exercise an efficient stroking pattern that utilises your shoulders to reach and then catch more water.

Why is this? The problem again partly lies with balance. When you rotate in the water to reach out in search of new water, you will potentially feel unbalanced AS you roll. This is your body unconsciously telling you it rejects wanting to hold that glide because it feels uncomfortable – it is not relaxed because that is currently an unfamiliar movement pattern to it. This is just your body's way of telling you it does not know how to maintain the balance comfortably but this as we know is critical to maintaining streamline AS you rotate. The opposite of a good shoulder extension with the associated rotation is…
Decreased Glide & Decreased Propulsion

FLEXIBILITY
If you desire to build an efficient stroke that comprises the hallmarks of excellent shoulder extension (reach), body roll, (initiated by the reach) and a good glide then you absolutely MUST GET YOURSELF FLEXIBLE.

Flexibility affects everything you can do in the water from kicking to tumbling to balance. Swimmers who have excellent shoulder mobility will certainly be more efficient and more relaxed in the water because they are physiologically able to move through a greater range of required movement patterns with little or no effort. In a good swimmer's case, all their energy goes straight into producing propulsion while their balance, streamline and other correct

technical habits are all taken care of by an excellent training program.

Most of us understand what we have to do to be a better swimmer but physically cannot get our bodies into the correct positions only because we lack the correct flexibility. We still soldier on though, trying to force our body into more efficient technical patterns from not having the required relaxed range of movement. All we are doing in this situation is using far more energy than is necessary and fuelling that feeling of frustration even further.

SOLUTION
Work on your Flexibility by programming it into your workouts!
There is only one way to improve technique for many of us. We always have the thought in the back of our mind "I'm gonna get more benefit from working harder on my fitness, flexibility can't be that important" – this attitude is clearly incorrect!

There is but one solution – you MUST set yourself a good shoulder & side stretching routine and commit to it before (or after) every swim you do. There are no shortcuts but this element alone will have incredible results on your swimming speed. After a couple of months of committed stretching, you will begin to feel your arms stretching out with every stroke and catching water you've never touched before. More than likely your streamline will improve as well, due to your hips not skewing out sideways (snaking) every time you try to reach out longer than your flexibility allows - putting a bend in your body. Flexibility is definitely the easiest way of improving your swimming without even getting near water and it's a damn site easier than getting fit. All it takes is a time commitment and you're on your way to faster times in the water.

DRILL
As you persevere with increasing your mobility levels you can also begin to feel that elusive glide that all good swimmers have by drilling. This drill will teach you correct stroke - kick timing, and also help confine your movements to those that are correct, resulting in better technical habits

Catch-up & Zipper Freestyle
Speed: Super slow slow mode!
Method: Start and finish this drill in the streamline position (hand over hand wrist over wrist, parallel fingers, squeezed elbows around your head, long body and pointed toes). Swim freestyle normally but with these important changes –
1. slide each arm down straight & long and allow your hands to catch up to each other in front before they begin to pull - do NOT pull with your leading arm until your recovery arm actually touches it
2. pull quickly & feel as much water as possible on your palm
3. recover very slowly with the opposite arm, being very aware of the gliding feeling forwards on your lead-hand
4. kick vigorously but fluently each time you pull – feel the glide & DPS

5. combine with Zipper drill, running your thumb up your sides so that your elbows point t the roof each time they recover
6. relax your head down so that drops down to it's balance point (in line with your spine).

Teaches: Catch-up emphasises holding your streamline (reducing drag to a minimum) & maintaining long stroke length. Both these factors will increase your DPS, a measure of swimming efficiency (distance per stroke).

Correct and efficient freestyle is actually nearly catchup. All World class freestylers delay their leading arm from pulling until the last microsecond because it maintains their streamline for the maximum length of time.

Cues: Delay your arms from pulling until touched, pull fast, recover very slowly, kick vigorously
NOTE: when drilling, the slower you swim - the faster you learn!

SUMMARY
By identifying your stroke rate by counting a few lengths (best done at the end of a session) you will instantly know to what extent you can benefit from working on flexibility and the drill mentioned in this article (this will be all of us – we never get too good!). When you can successful improve your flexibility, your free range of movement will increase then allowing you to hyper-extend your arms into that effortless streamlined glide position. It is this extension of your shoulder that sets you up to pull more water and you will then find that your stroke starting to resemble a catchup drill.

So, plan an effective stretching routine before every session and practise an extension drill like catchup to promote the correct feeling of reaching as you become progressively become more flexible. Periodically count your strokes during sessions and in 2-3 months you will notice a major change in the way you are swimming.

KEY POINTS
1. Stretch! Make flexibility an integral part of every swim session
2. Practise feeling the stretch (extension) every time you stroke and glide
3. Drill in super slow mode – this enhances your learning Incredibly

Cheers, and remember - always relax,
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