



**The one about smooth
swimming
(with Paul Newsome from
Swim Smooth)**

Podcast 11

The Effortless Swimming Podcast



Welcome to this episode of Effortless Swimming podcast. Today's guest is Paul Newsome from Swim Smooth. Paul back in his younger years was an elite Tri-athlete in Britain and he was the British University Triathlon champion, he swam the Rottneest Island Swim and he has also done the English Channel. He is the head coach of Swim Smooth which operates out of Perth.

So welcome to the call Paul

Not a problem Brenton, nice to be here today.

Some of the things that I wanted to cover today were the six different styles of swimming that you teach through Swim Smooth; Some of the differences between the sprinting stroke and a distance stroke? Some of the things that you like to do in training to work on technique; then some of your favourite sets and some of toys that you like to use in the pool?

Absolutely, fire away.

To get started just give me a bit of background on Swim Smooth, how did you get started and what do you do there? You have a lot of products and you also run training squads there what is the back ground of Swim Smooth?

Well my own personal background is swimming; I have been swimming since the age of seven competitively. I got into Triathlons when I was about sixteen years of age and studied sports and exercise science at Bath University in the UK. At that time of was part of the British World Class Performance Triathlon Team which was great to be involved with and I was very fortunate to be coached by some excellent coaches at that time. I moved over to Perth in the start of 2002 and immigrated over here so have been here just over ten years now which has been fantastic. When I first arrived over here I was actually coaching the largest Triathlon squad in Western Australia; a club called Stadium



Triathlon Club and that was a fantastic place to find my coaching feet if you like and get into things. Really Western Australia as I am sure with yourself Brenton over there in Victoria is just an absolute hub or a Mecca for open water swimming, for Triathlon for pool swimming; everyone seems to be into it these days and over the years that participation has grown. Back in 2004 I decided I would quite like to put together a video for my Tri-athletes within that squad to actually show them how to improve their efficiency of their stroke and basically catalogue a series of drills that we were doing at the time and still continue to do to this day to **improve someone's efficiency in the water. So Swim Smooth was officially** born if you like at the end of 2004 with the release of our first DVD, the Swim Smooth DVD box set. They continued to sell really well even today. The swim types when you mentioned at the start, the Swim Type system is something we have been working on since about 2007. Sort of middle of 2007 end of that sort of period and that was officially released in July 2010. So it is about three years of work basically went into the whole Swim Type system and the sort of comical and light hearted as we try to make it on the website it has very much a serious undertone in terms of trying to help other coaches and sub-coach athletes recognise what it is; the fundamentals of what is holding them back in the water. How they are different from other swimmers and how to actually get them moving forward, so Swim Types is really very much at the heart and soul of what we do now with Swim Smooth and are very pleased that within the last two years to have actually re-written the entire swim coaching curriculum for the British Triathlon Federation over there in the UK so they are actually now utilizing Swim Types and Swim Smooth or out methodologies basically for coaching their coaches and they have I believe over 3000 registered coaches over there which is a phenomenal number of coaches you know.

Brilliant. For the swimmers that haven't seen the different swim styles; basically the different kinds of categories of swimmers. Not everyone has the same stroke but it is different kinds of techniques and strokes that each different swimmer is in. You have put it down to six different kinds. I think it is really good because it really classifies each type of swimmer really well and you can usually tell just by looking at your own stroke you can normally fit yourself quite neatly into one of those categories and then you can go about changing or improving you technique based on the instructions that you give.

That is exactly right, and we wanted... we have been very firm of the belief that different strokes for different folks if you like. We recognise



that with working with the sheer number of people that we have been fortunate enough to work with over the years that you get athletes from sorts of different backgrounds and abilities, different physical builds etc and even personalities play into this quite significantly as well. For the coaches that we coach now for our coach education system, taking them through the personality angle of each of the different swim types is quite interesting because you I know I remember as a young coach myself being sort of fairly intimidated I guess by some of the swimmers that I was coaching you know thinking are they constantly questioning me? Do they really trust what I am saying? Whereas other swimmers you tend to have to take a little bit more of a gentle subtle approach with them, other swimmers want a bit more of a technical conversation with you. Some swimmers just want to get in there and have a good hard solid session and they are not interested in the technicality of swimmer as long as they get a good workout and I think that is important that we recognise that and I think that at the very top level of the sport really we are seeing two very distinct style of swimmers. You have asked the question you know about what is the ideal sprinting stroke and the ideal distance stroke; I think that is still very much an individual thing but within the Swim Type system we have at the top of our table if you like we have two swim types one we call the smooth which is your classic smooth freestyle stroke, i.e. Ian Thorpe, Grant Hackett, Rebecca Adlington that sort of stroke where you look at it and think wow that is effortless, it looks awesome it looks fantastic, looks very very smooth. But on the flipside of **that you know we also recognise that many of the world's best open water swimmers and tri-athletes tend to swim with a much different style of stroke.**

Janet Evans recently has just tried to try out for the US Olympic Team on **a massive comeback and unfortunately she didn't make it but everyone** will sort of recall her stroke as being very unorthodox at the time; very straight art recovery very high stroke rate, many many strokes per length. Where Ian Thorpe may be 32 strokes per length Jane Evans around about 50; yet for many people they would sort of consider 50 strokes per length to be inefficient whereas they have Janet Evans world best swimmer in her heyday sort of thing. Really sort of going against convention and showing how it is done. More importantly how the stroke actually worked for her.

Again it is very much a question of horses for courses and so very quickly to do a brief summary of the different swim types that can be looked at in a little bit more depth at SwimTypes.com; we have our classic swimmer to start the swim types which is The Arnie so this is the classic swimmer



that looks like they are actually fighting the water; they have maybe had a team sport playing background they want to get down the pool as fast as they possibly can, they tend to have very very low sinking legs in the water. This swimmer knows that if they grab a pool buoy or pop a wetsuit on it has a significant improvement in their swimming speed and their relative efficiency in the water. These swimmers need to work on essentially to improve their body position, potentially slowing down their stroke rate a little bit and working on lengthening out their freestyle stroke. So the sort of conventional swimmer coaching model you know lengthen out the stroke, slowing down the stroke rate can work very very well for the Arnie swim type.

Our next swim type is the Bambino; now bambino is almost the lower par **version of the Arnie. These swimmers aren't quite so competitively driven** potentially as the Arnie. So they also have very very limited swimming background they tend to have maybe sometimes even a little bit of nervousness or fear of getting in the water. Their swim stroke is actually characterised by the fact that when they go to take a breath to the side typically the lead arm will simply slip and drop down underneath the water and not give them any sort of support at all. It gives the impression that they almost look like they are climbing out of the water and everything just looks very very panicky. Certainly within the squad situation you know the bambinos are actually quite nervous to actually **attend the squad situation. That shouldn't be the case obviously and by** showing the bambino what they need to do to improve the timing and rhythm of the stroke then things can be really improved quite well. Bambinos generally really enjoy the challenge of swimming. In a different sort of sense of the Arnie to being competitively driven usually the bambino is very much into it because of health reasons and just wanting to strive to do better for themselves.

We have the Kicktastic; certainly I remember as a kid going through the British Swimming System we used to do endless kicking sets etc within the squad. Many Kicktastics have generally got a stroke swimming background and they have maybe developed a stroke which has a very propulsive freestyle leg kick but maybe is lacking a little bit in the catch department at the front end of the stroke. So they tend to resort to utilising the leg kick maybe a little bit too much and certainly for open water swimming and for triathlon obviously conservation of energy on the legs is very important indeed. These swimmers are often the ones during a pool buoy set, if you give them a pool buoy they will often slow down quite dramatically within the group. So the Arnie often swims faster because the pool buoy gives them better body position whereas the



Kicktastic tends to swim a bit slower because you have taken away **they're leg kick**. They often also find **swimming in a wetsuit a little** awkward in that the buoyancy of the wetsuit can lift the legs a little bit too high in the water. So Kicktastics often need to work on their catch developments and improve in improving that aspect of the stroke. One fairly famous athlete that we work with certainly within the Ironman fraternity here in Australia is an athlete called Kate Bevilaqua now she **wouldn't have been a classic Kicktastic when she first came to join in with the squad**. Kate has won a couple of Ironman's around the world including Ironman Western Australia and over the last 18 months we have helped her get her ironman time down from 62 minutes down to 53 minutes which has had a profound impact on how well she is swimming and racing as well so that has been a good challenge to work with.

Our fourth swim type is the Overglider now obviously a lot of conventional swim coaching programs sort of purport that you should be trying to lengthen out the freestyle stroke as much as you possibly can trying to reduce how many strokes you take per length in an effort to improve you



efficiency of the stroke. But what we find time and time again is sometimes this advice is literally being taken way too literally. I had a chap at Challenge Stadium in Perth about a year ago who he said I am just not getting any faster I **don't know what's wrong, I swim five times a week do five sessions I have been doing that for five years and just before he set off for me to film him he said I still can't break 25 minutes for a kilometre, so 2 minutes 30 per 100m and he said I just can't get it because I can do 28 strokes per 50m and that is better than Ian Thorpe; those were his words. Ian Thorpe takes around 31-32 strokes per 50m and he said I just don't get it.**

Now what was obviously happening with this guy he was almost swimming a complete catch up style of stroke so they hands were just waiting out in front of his head, he was actually **decelerating, didn't recognise this was causing his legs to drop down in the water** and his stroke rate, strokes per minute was 33 strokes per minute whereas Ian Thorpe would have been 76 strokes per minute. So when we see these great Olympians like Ian Thorpe and it was a **fantastic, I don't know if you saw it Brenton the ABC documentary about Ian Thorpe at the weekend**, when you see his stroke they often look like they have this very long smooth freestyle stroke and they are taking fewer strokes per lap but there is a limit to how long you want to make

that stroke and unfortunately the Overglider often being quite technically minded wanting to do the right thing and very analytical in their approach can push this angle a little bit too far and unfortunately have quite a sort of surge stroke with a lot of dead spots or delays at the front end. It is very classic to see this swimmer dropping their elbow and actually presenting the palm of their hand forward creating a bit of a blocking effect when they do so.

That brings us onto our final two swim types. Obviously mentioned the Smooth several times so when we think of an efficient freestyle stroke we often think of the smooth style. This style often suits pool swimmers, very good swimmers. It is high elbow recovery relaxed shoulders a long Smooth efficient freestyle stroke but the biggest single difference I guess between the smooth and the Overglider is that whilst the Smooth is actually lengthening forward they never actually pause stop and do nothing at the front end of the stroke. This is one of the reasons why we have a little term that glide is a dirty word. Essentially what we mean by **this is that many people's** perceptions of the word glide is to actually pause, stop and do nothing momentarily at the front end of the stroke. When you see the Olympians swimming they do extend at the front end of the stroke, they do have that long smooth freestyle stroke but it is **important to recognise they don't actually pause at the front end they are actually setting up for a good catch, initiating the catch and starting to press the water back. I am certainly seeing some of your video's there** Brenton with some of the elite guys that you have worked with over there in Victoria and you can certainly see that in their strokes they do have that sort of continuation that flow and rhythm in their stroke. They are fantastic technicians basically. So the Smooth is a very sort of enviable stroke style and what we often find and this sort of came across in that Ian Thorpe documentary at the weekend was that from a personality perspective the Smooth has grown up in the pool, they have been the envy of the pool basically. But sometimes maybe they have had a little bit of timeout in the pool and sometimes motivation to get back into the pool and follow that black line up and down can be a bit of an issue for the Smooth and try to set new challenges for the coach, keeping the variety there trying to make something new and exciting for the smooth is the key thing to really work on. We do encourage quite a few of the guys who have actually finished their pool swimming careers over here to perhaps look at the prospect of taking up triathlons or open water swimming. Our own Mr Smooth Jono Van Hazel who we used as a base for the animation Mr Smooth he went to the Athens Olympics for 50m freestyle with a great freestyle stroke and now we are just trying to challenge Jono with a few



Ironman and doing something completely different and that really engages him once he gets into that which is great.

Then obviously finally, the final swim type the Swinger often suits slightly shorter swimmers, shorter stature, shorter arms. I am personally a Swinger myself, years and years and years ago in the pool I used to feel like I could never really get a good sprint and I never seemed to be very good at 50m or 100m freestyle but given the opportunity to do something longer like a 400m or 1500m freestyle I seem to be significantly better at those distances. But obviously as a kid growing up, 10, 12, 13 years old sort of thing, very rarely did I get the opportunity to do that. Sometimes, some of the Swingers out there who may be younger kids sort of thing **who don't** really excel in the sprint distance fraternity can sort of get overlooked a little bit. We know we want to make sure that those guys get encouraged as well through the system. So characterising their stroke is much straighter arm recovery typically. Often a two beat leg kick, a much higher stroke rate typically whereas Ian Thorpe may be swimming **76 strokes per minute some of the world's best Swingers and those guys** winning the 10k marathon championships etc tend to have stroke rates in excess of 85-90 strokes per minute so it is quite a jump up. This gives them a little bit more fluidity and rhythm in rougher conditions so swimming through chop etc can really help them in those situations.

Yeah it's funny as you go through each of those, as you describe each one I can think of a swimmer that fits that category. So it is really well done with the classification of the swimming styles there.

Thanks very much.

In relation to the Ian Thorpe documentary it was really good and really interesting. One of the things that he spoke about was his need to change his stroke to become a 100m and 200m freestyle instead of a 400m freestyler. What are some of the common things that you encourage people to do when they are training for sprinting?

Absolutely. First off I should probably point out that fact that I primarily deal with distance freestylers, for pool, open water and triathlon. But in terms of the sprint stroking obviously one of the things that Thorpe mentioned on the documentary was how he was trying to change slightly the rhythm of the stroke. So some of your listeners will probably be familiar with the term front quadrant freestyle swimming; so basically the



concept of always having one hand out in front of the head at any one point in time. Thorpe was explaining how he used to as a 200m and 400m freestyle specialist he used to have almost that sort of catch up style of **freestyle stroke but obviously when you viewed it in full motion he's never** actually pausing at the front end of the stroke. What he was explaining with his coach Gennadi Touretski was that he was starting to look at what would be classified as more of a rotator style of freestyle stroke. So basically engaging the catch just a little bit sooner allowing the stroke rate to come up a little bit higher and obviously effectively the length of the stroke would shorten down just a little bit. But what is really **interesting about that is when you actually put the world's best sprinters up along the world's best open water swimmers and tri-athletes its often;** and we do this in all our clinic sprints and its often the specialist distance **freestylers which often appear to look like they're the sprinters. Whereas** the guys intending to that higher stroke rate as I mentioned the Swinger style and the sprinters are swimming like Jono Van Hazel appearing to look like they would go on forever but in fact they are actually specialising **in the shorter sprint distance event. So it's quite interesting to see when** you look at it like that, obviously we use the term, you use the term **yourself effortless swimming, that's obviously for the sprinters once they** look someone like Jono Van Hazel looks very effortless obviously we have to remind ourselves that he is not actually effortless he is putting in a lot of effort there to generate the propulsion that is needed to swim at world class speeds etc. You know, but there we go, yeah that would be one of my takes on that. I think really, again the difference between the ideal sprinting stroke and distant stroke when we see the Olympics in one **month's time, which I am going over to the UK for, you know when you** line up in the final of the 50m freestyle, the final of the 100m freestyle the final of the 1500m freestyle in those 8 lanes you are going to see **8 different strokes. It's the** swimmers optimising their strokes for their own abilities their own background sort of thing their own height and build etc **that's what we should really be looking for. I think one of the biggest** things which I would encourage everyone to look out for at the Olympics **is odds on favourite for the men's 1500m will be Sun Yang from China** who is currently training over on the Gold Coast there. He broke, earlier **last year; he broke Grant Hackett's world record for the 1500m freestyle.** He is your classic Smooth very long smooth freestyle stroker. I believe he is 6foot8 or something. Taking around about 28/29 strokes per 50m and a stroke rate of around about 64-66 strokes per minute. Really cranked it up in the last 100m but in that same event where he won the world **championships, sorry set the world record, the women's winner of the** 800m and 1500m freestyle which is a special event for them there was a lady called Lotte Friis and her stroke style couldn't be any different, sorry



couldn't be more different than Sun Yang's. She was swimming with a much shorter stroke, a much higher stroke rate a very sort of classic Swinger style. So it would be interesting to sort of watch all those swimmers and just sort of... As a swim coach I always get asked the question well if he swims like that then why shouldn't I swim like that. Or will that work for me etc and it's about sort of recognising what's working obviously for that individual swimmer and just sort of take an interest in that and looking at the differences as well.

Yeah that's exactly right, each swimmer will have a different technique depending on their size, their shape and what their strengths and weaknesses are with their swimming. You will see Sun Yang has one of the longest strokes I think you will ever see he just has a beautiful freestyle but that is obviously not going to suit everyone and some people need a higher stroke rate with less kick. That's one of the things that I wanted to talk about too is that with your work with distance swimmers and tri-athletes what are some of the common things that you teach them to do in order to a 400m plus race?

Well certainly looking at the... we tend to look at the balance between the amount of technique work they are doing and the amount of pure fitness work they are doing. Also if they are racing in the open water then what sort of combination of open water skills are they actually throwing into the equation as well? We find that many swimmers come into the sport; the classic thing for a Swinger to do for example is to only focus on the hard work because they like to actually get that burn and very rarely we find swimmers like the master swimmers that we work with they are not really that interested in doing drill and technique work but obviously trying to tune up and improve their catch and pull through for example for the Swinger can be a very beneficial thing and watching out for things like shoulder injuries because of the slightly more ballistic recovery action over the top of the water then that can really help. So those guys tend to be a little bit more skewed towards the fitness angle sometimes. They like to sort of get on with it and get onto a hard session. Whereas on the flip side of that there are a lot of swimmers out there who have been taught, primarily the Overgliders who have been taught or read that they should you know only focus on technique and font sort of practice any hard work or any sort of struggle if you like until their technique is re-honed. Unfortunately what we tend to see then is that these swimmers tend to become what we affectionately known as technique hermits so they just literally do drill after drill after drill 25m drill, stop think about it for 30 seconds, drill 25m stop for 30 seconds so clearly between those two swim



types there can be a lack of balance between good technique and attention to detail for the stroke and also appropriate fitness training as well. **That's one of the things that we really consider when we are coaching the guys for distance freestyle swimming and just ensuring as well too I suppose one of the key things that we work on over here Brenton on a weekly basis is sort of showing somebody identifying what their threshold pace is for 1500m and then showing them how we can actually work with that; identify that pace and work with that and actually encourage better pacing over a longer distance. That can certainly have a profound effect. I know myself I am the world's biggest hypocrite when it comes to pacing I just stand there on the pool deck waving my things you have to pace yourself better you have to pace yourself better and yet when it comes down to the crunch and the competitive drive kicks in I am as bad as anybody in trying to control that. Equally when I have had my best races it has been because I have controlled that pace awareness. Certainly for building up for the English Channel last September that was a very important part of my training program for myself.**

That's not an event that you want to go out to hard in is it, the English Channel swim?

No especially when you have no idea how long you are going to be out there for. I got a really bad day we had a 35knot headwind across to France the whole way and a 3.5m swell as well so it was very nasty conditions. I was hoping, I was in very good swim shape and just swam 25km in six hours before the event and was hoping in good conditions I would get across in around about 9 maybe 9.5 hours but it took me over 12 hours to get across there in those conditions. You just never know what you are going to get when you get out there; I sound a little bit like Forest Gump there but you literally never know what you are going to get when you are out there. Even some of, we are fortunate enough to have **the world's largest channel crossing event over here the Rottneest Channel swim** a fantastic event if any of your Victorian listeners over there are interested in coming over for it. Even with an event like that the difference between a good day and a bad day even for the fastest swimmers can be about 45-50 minutes. When you have these goals of trying to break a time and stuff they can rapidly fly right out the window without too much hard work at all you know.

Yeah that's right, two of the guys that I used to coach in the past Oliver Wilkinson and

Yeah, yep yep



You know Ollie, and...

Fantastic swimmer

Oh fantastic and he is just Lido 42.2km swim at the Lido Pool in the UK

Oh right

Just to raise money for the pool

Was that Tooting Bec Lido was it?

Was it what sorry?

Was it the Tooting Bec Lido?

I'm not sure.

There were a couple of them down there in the London borough. Ollie won the, he was second at the Rottneest Channel swim in 2011 I believe and I think he was awarded swimmer of the year I think by H2Open Water Magazine last year as well.

Oh right.

Didn't he also set the world record the Manhattan Island swim last year?

Yeah he did that's right.

Yeah so a fantastic swimmer yeah. I have never actually met Ollie but hopefully I will at some point we are hoping to do the Manhattan Island swim ourselves. About a group of 6 or 7 of us if we get selected for next June.

Oh that would be awesome. That would be a great race, a pretty distance but you have the tide with you which makes it a bit easier.

That's right that's right yeah.



That would be awesome. Back to the pacing side of things; in our training we like to do a lot of build efforts so you can judge your pace. Get a feeling for how hard you need to go to get back onto pace and you realise that once you get to the very high end of your pacing where you are working quite hard the improvements are quite small compared to the amount of effort that you put in. So if you can find that happy medium where you are not working too hard and not increasing the lactic acid build up but can still hold those fast times without burning yourself out; that is the kind of pace you want to practice.

Definitely, definitely we have got a page on our website Swimsmooth.com/training which talks about critical swim speed so basically the identification of exactly that point that you are talking about there Brenton, threshold pace for about 1500m. When people start to identify that it is very simple to identify you don't need to do a crazy lactate analysis session or anything like that you just do a 400m time trial and a 200m time trial and the 400m looks at the aerobic components of your fitness and the 200m more the anaerobic component. This is a system that has been tried and tested since the early 90's. On the website you will see that you can actually just plug in your 400m and 200m time and it will spit out a pace per 100m which is essentially the pace that you are talking about there or what we call critical swim speed.

When swimmer first start working with that, like you, it almost seems like it is a bit slow to get beneficial improvements overtime, especially for the swimmers being used to more sprint based training. Doing lots of sprints 50m, 100m with you know 30-45seconds rest between each one. Whereas a pressure threshold type training session should be much shorter recoveries working around that pace. They only start to become really quite solidly hard around about the 1000m so every week we have a session that is totally dedicated to working towards that pace. Earlier on this year we put through 128 swimmers in the squad we identified their threshold pace and started 10 weeks just after Christmas and then every week we tried to actually make that speed .5% faster. Which only equates to, it only equates to around about two tenths of the second per 25m using a Phillips tempo trainer. The swimmers are then encouraged to hold a slightly faster pace each week. So marginal was that improvement that they hardly even noticed it each week as they were getting fitter and faster etc and across the group we saw an average improvement of just on 3% basically in their threshold pace. Which over ten weeks is a substantiation improvement. Like you say it is a great pace to sort of thing as your base pace for a hard session. Obviously that is not to deter



you from doing intervals faster than that or working pace is slightly slower than that but it should... every athlete or every swimmer should really know what that pace is and use it as a bit of a bench mark for most of their sessions really.

Yeah that's really good and it pays to be specific in your training and know what times your working towards. We do a lot of stuff, targeted towards the 100m and 200m because we are more of a competitive pool swimming club but we like to work towards say your 100m back end speed of the 200m speed so your last 50m of your 100m you want to target that time so we might do say 10 x 50m's on a 1 minute 30 so you are getting more rest but need to hit that 100m back end speed.

Totally. You are totally right, say the majority of the swimmers/tri-athletes in my squad are looking at longer distance stuff we had we developed the program a little bit more like you are saying there for 100m and 200m then yeah we would be following a completely different sort of program. Like you say Brenton it is important just to identify what distance you are going for, the specific of that and what you need to train for. I remember as a kid you know on some of the sessions I would be doing had I been specialising more on the longer distance stuff than some of the shorter faster stuff **wouldn't have worked and vice versa.** There is no point in doing all the long steady stuff if you want to be sprinting so it is about keeping that balance and addressing that balance correctly you know.

Yeah that's it, that kind of leads us into favourite sets. What's probably your favourite distance set that you like to do with some of your tri-athletes and open water guys?

I actually wrote a blog about this last week. We called it the "Red Mist Set" and it's not a set which I have created but basically the term Red Mist came because the guys tried it last week and it is a set which I personally do every Monday morning by myself and it is simply 10 x 400m. **Arguably the world's most boring swimming set but one which is very challenging and especially if you get the pacing out absolutely spot on.** So we call it Red Mist because during that session we had about I think 36/37 people down to that session and there were a lot of grumpy faces during that swim. People getting snappy and irritable with each other and stuff and basically when you put yourself under pressure like that to do a really challenging distance freestyle set you are going to feel like you are right on the rivert like that and that is essentially what



happened during the day. So we decided to call it the Red Mist set and essentially it is a series of 10 x 400m with approximately only 20 seconds rest between each one. The way I do it personally is I will do the first 4 x **400m's at a pace of 120 per hundred it will then do the next 3 at a pace of 119 per hundred the next 2 at 118 per hundred and the last 1 at 117 per hundred metres.** I will get around say about 15/20 seconds rest between each one. So there is not a lot of rest and recovery at all and it is as much of psychological set as it is a physically hard set basically. You are trying to manage your stroke trying to maintain the best possible technique and form that you do throughout that set so as not to actually drop off. I have personally been doing that for years and years, every Monday morning. **That's what we used to do over at Bath University and I used to personally absolutely hate it and dread it and not want to do it whatsoever but it was simply because it was a weaker area of my own performance at that time.** I had grown up with more of a sprinting background, I hated doing the distance stuff because I wasn't very good at it and I found like my pace would drop off. But now I actually relish that challenge and sort of recognise in fact that ok maybe back then perhaps I wasn't particularly pacing myself well or maybe my stroke was falling about, maybe I was setting off to quickly etc. So that is one of my favourite distance freestyle sets it is very basic and certainly like I say it is not something that I have invented it's something that coaches have been using for years and year and years. It is very much, when you speak to most distance freestylers it is very much at the corner stone anywhere between 10 and 15 400m's at around that sort of pace which would equate to on the first set of four your threshold pace plus about 6 seconds per hundred. So for me at the moment threshold pace being around the 114 per hundred mile plus six seconds 120 per hundred and then sort of working down from there.

In terms of the favourite sprint sets, again this is not one of mine it is one which I have been doing for years and years and years passed on through the coaching fraternity if you like. Supposedly this was a Grant Hackett set and I am not sure if that is true or not but it is basically a series of 40 x 50m. It is a speed set but it is also a speed endurance set because basically the set itself is 40 x 50m broken down as 16 x 50m where you have make the very tight turnaround time and on every fourth interval you need to try and sprint. Because of the tight turnaround time on that first set of 16 which would be let's say a turnaround time of 45 seconds so you are maybe getting 3-4 seconds rest between each one. The difference in your speed between just making it and actually sprinting is going to be very limited. But the next 12 50m's you then add 5 second recovery but you sprint a little bit more frequently. So you sprint every



third 50m we then do 8 x 50m's add another 5 second recovery but you sprint every second 50m and finally finish off with 4 x 50m's sprinting every one and by that point you are adding a total of 15 seconds extra to the recovery time to allow you to actually get faster as you go throughout the set. So that is one of my favourite sets, maybe not a pure sprint set like say most of my swimmers we more in the bracket of 50m – 200m competitive swimmers then we would go for a lot longer recoveries. We would aim to go a lot faster than that. That is quite a nice little sprint set to throw in there and challenge the swimmers definitely.

We do something very similar to that where we do... depends on how much time we've got and things like that. We do anywhere from 30 – 50 x 50m's and usually have them all on 50 but we might go every fourth one fast and then well go every third one fast every two and then everyone. It is good for the open water because you need to be able to sprint when you are doing open water too. To make a break or to stay up with the pack or get on someone's feet you still need that speed you can't just have that; that slow aerobic pace you need that speed as well.

Definitely. That is particularly true of the pointy end of the field. We have been doing some video analysis and worked with a swimmer over here called Rhys Mainstone who won the Australian 10km championships at Champion Lakes over here in WA. We don't actually coach Rhys but we have been doing some work with his coach Mel Tantrum and we... I am very much a gadget geek and we got Rhys to actually wear a Garmin GPS underneath his swimming cap during the state 10km championships which he won quite convincingly. His average pace was just under 107 per 100m for a 100 x 100m's in a row for 10kms which is just incredibly quick. What was really interesting was the first couple of 100m's they set off 104's 104's and then it slowed right down to about 115's per 100m. There was a group of maybe about 15 -20 guys all still together and then at the 5km marker Rhys and Trent Grimsey, apologies for Trent for not remembering your name there mate, but fantastic swimmer. The two guys we were actually filming them at the same time and Trent came through at the 5km marker with Rhys right next to him. They had made a little bit of a surge break by themselves and I actually have it on video with Trent actually turns to Rhys and shouts "come on Rhys let's work together and you see them actually drafting off each other for the next 5km and its fantastic. When we look back at the data we saw that the way they actually forged that gap from the guys behind them at the 5km marker was they put in a period of 450m at an average pace of 102.5 per hundred. Just smashed the guys just absolutely smacked them around



basically. They had been swimming for the best part of an hour and then all of a sudden the two top guys in Australia smack them for 400m and everyone is gone. Like it is carnage behind them basically. Then they have obviously worked together they have settled back in and then the final lap is them just going head to head against each other. On that occasion Rhys beat Trent but it was literally by a couple of hundredths of a second so it was a fantastic event to watch and like you say at the pointy end of the field those guys definitely need to know how to surge and cope with that.

Yeah that just goes to show that you need to be able to pick up your speed within a race. Especially if you are picking it up by 13 seconds over 100m.

Yeah absolutely. **It's incredible basically and those guys if they were doing a time trial by themselves then arguably they would sit at a constant pace.** Rhys would just sort of average out 107 per 100m but when it comes down to the competition and trying to get people off your feet etc **then that's the deal. Thinking back to the Beijing Olympics with David Davies leading out pretty 9000m of about 800m of the 10,000m swim with everyone else drafting behind him. Unfortunately it just didn't have that turn of speed to actually shake them off his feet.** When drafting gives you anywhere up to 38% of the energy saving it is very hard to actually break somebody without a massive surge like that. Rhys and Trent were clearly able to do that in the state championships.

You said that you are a bit of a gadget geek. What are some of the toys and accessories that you like to use in training?

Well, I am hoping that you don't mind endorsing a company here, but one of the companies that we really find their gadgets to be very useful is the company called Finesse, they are based over in California. They produce some really good training tools etc. Often independent coaches have come up with some of the ideas for developing these products and they have gone to Finesse and they helped them sort of take those ideas even further. So in terms of what they do and what we like, arguably one of my favourite pieces of tools is the Finesse pro training pro. This is a little **gadget that allows you to work on things like stroke rate and also you're pacing as well.** So the sets that I was mentioning earlier on you know where you are trying to pace yourself out to exactly 119 per 100m that breaks down to a pace of 19.75 seconds per 25m. So all I do is simply set it to 19.75 stick it underneath my cap, wait for it to beep, set off and each 25m mark I just make sure that I am actually there on pace each time.



For somebody like myself, who you said before, has that competitive urge to go to quick to soon it is a great controlling agent in that respect. We love working with those.

I also like the freestyler paddles which are shaped like an arrow head with a single strap for the middle finger. Paddles themselves over the years have had a bit of a bad reputation for causing shoulder injury. When in actual fact it is not usually the paddle that causes injury it is poor technique combined with the resistance of a larger surface area of the **paddle. Especially when it's bound to the palm of your hand with millions and millions of straps.** So the spear paddle of the Finesse freestyler is great because unless the hand enters the water correctly it has a tendency to fall off. It is a very good feedback mechanism for the swimmer to ensure that they are getting that hand entry correct into the water.

What else do we like... we encourage all our swimmers to have obviously **the essentials like fins. We do a lot of fins work, we don't do too much** specific pure kicking work but we do a lot of work i.e. kicking on the side and those sorts of things that actually develop the swimmers kicking ability and efficiency. Especially if they have stiff ankles using the flippers to help the ankle flexibility works really well we find. Again like you say **most of my swimmers they're distance free styling so I am not really** looking for an overtly propulsive freestyle weight kick in that sense.

Pool buoy, standard piece of kit I guess and what else... there is a new **paddle that Finesse have just bought out called the agility paddle. I don't** know if you have seen that but it is quite a cool paddle in that it has a slot for your thumb to slide through so there is no straps. It is designed a similar sort of concept to the pro freestyler in that if you are doing something wrong with your stroke it will fall off and feel really bad. If you are doing something right with your stroke it will feel fantastic. This is aimed to work specifically on the higher elbow catch underneath eh water and we really like those paddles as well.

There are some good toys there. Do you use a snorkel at all?

Yes I do. It depends again on what I am trying to work on with the swimmer. One of the things that I like about the snorkel and also just simple sets you know, many coaches call it epoxy breathing; breathing three, five seven or even nine strokes we try to encourage swimmers not to hold onto breath when they are doing that and obviously when they are



using a snorkel they can just breath freely whenever they do. But one of the nice things about the snorkel and those longer infrequent breathing sets is that it just allows the swimmer to obviously focus on the stroke a little bit longer before they go to take a break in and disrupt the rhythm of the stroke. What we often find and I am sure you find this yourself Brenton; there is going to be a point in the stroke where the stroke will fall apart it will always be when the swimmer goes to take a breath usually they will an arm or push down against the water or the legs will scissor kick apart or cross over in front of their head. Most of these inefficiencies that we see on a daily basis always occur during that breathing phase. So using the snorkel it is not designed to actually mask that but it is designed to allow the swimmer to actually have a continuously uninterrupted period of time where they can just focus on things like body rotation and the catch and those sorts of things. Similarly with the "Hypoxic Training Sets" as well, they can work on that.

Yeah, I have just made all my swimmers get a snorkel this year because we use them in a kick, because we do quite a bit of kick for our speed work. But it is also good for doing some drills like single arm freestyle where the swimmer doesn't need to breathe...

Yes

And just really concentrate on what the drill is designed for.

Totally. Totally yeah. We do obviously find and I am sure some of your swimmers find this as well that some swimmers feel a little bit claustrophobic with them especially when they are little bit less advanced in their swimming capabilities.

Yeah we have trouble convincing them to use them at the moment for some of them, they just don't like the feeling or they haven't got used to it yet.

Absolutely. It does definitely feel a little bit claustrophobic in there, but once a swimmer breaks through that and sort of just learns to relax a little bit with it then it can really help. Obviously with things like nose clips can assist if the coach wants to utilise those.

Yeah that's right. Then the other thing I wanted to ask was what kind of ratio do you like to have between fitness and technique in your training sessions? Do you vary it based on your swimmers or what they're training for?



That's a really good question and that's really the basis if you don't mind myself plug here. We just published our very first book; The Complete Guide to Swim Coaching for Triathletes and Swimmers, swim smooth basically. The book is actually split up into three parts basically the first main part of the book sort of focuses on the technical aspect of freestyle swimming and how to develop that. The second part on developing swim specific fitness and then the third part developing open water specific skills. So within any training sessions that we do here in Perth I also encourage the swimmers that there will always be a certain percentage of each of those aspects within a given session. Then on a weekly basis we have twelve squad sessions over here and each one has a different focus. So for example tomorrow morning I will be turning up and taking the guys for a longer endurance session; something similar to those 10 x 400m's that's primarily focused on the half ironman guys and the ironman athletes and those swimming open water. So tomorrow's session will be primarily focused on pace awareness, pace judgement but it will be primarily a harder physical training session. The actual pure technique work that we do in that session i.e. drills will be very limited but the amount of physical training will be much more of a focus. Compare that with a Monday morning we do very little continuous freestyle swimming although it will be there as a proportion maybe 20% but 80% of that session will be primarily drills working on developing form and technique etc. Like I say every session that we do we try to have a certain percentage of each of those three aspects but each session depending on the goals of the swimmer of the session etc vary just very slightly.

One of the nice things about the squad is that we try to keep all of those sessions the same each week. So the session itself will be different but the focus of each session will always be exactly the same. So the swimmers know exactly what they are going to get when they turn up and correspondingly they can chose or be guided by myself about which session is going to be most appropriate for them given their goals and aspirations etc.

Yeah I like that and that's what we have done with our squad as well. Monday is usually our distance day, Wednesday is sprint, Thursday and Saturday are a mix and it might vary just depending on what competitions we have coming up.

Yeah



But if the swimmers sort of know what to expect when they get there then they are more mentally prepared for the set and you get the swimmers who want to be there more than the ones that turn up and are just solely sprinters and don't want to do distance.

That's right.

It's a good way to do it I think.

Definitely. It obviously makes sense to do it like that and again I think back to the times when I have maybe been in a squad where it hasn't been the focus. Maybe the coach has tried to sort of have every single session completely different, almost hoping that the variety will give people more enjoyment but sometimes too much variety like that can just sort of seem that the program itself as a whole is a little bit disjointed without any clear focus. Like you say having the attitude for any given training session is so important. If the guys turned up tomorrow morning thought they were going to do a technique session and then I hammered them with a harder longer red mist sort of session then they are going to be pretty upset some of them probably won't complete the session, and vice versa obviously.

That's it, the same goes with... depending on what the set it is I like to sort of let them know if it is going to be quite a challenging set I will let them know a few days in advance what the session actually is so they can get themselves prepared for it. That's what we did; we had a hell week where upped the intensity and upped the distance for a week and just really pushed ourselves for one week of training. I told them, I gave them the general outline of each of the sessions before they got there so they knew what to expect and they came there ready to work hard for a specific part of their fitness.

I like that a lot Brenton, like I say having that attitude sort of thing and knowing what you are up for, up against, I think is so important for that preparation especially for like you say with a hell week like that having the... They know it is going to be hard but how hard is hard and just being prepared for it psychologically can make all the difference. Obviously you are going to get a few swimmers that will be a little bit intimidated by knowing what is coming up and some swimmers you might hand them and tell them what you are going to do or send them an email and they may choose not to read it because they prefer not to know. But obviously



that is then up to them and I personally feel it is important to be prepared for a specific focus like that.

The Thursday session we did was a 10km session for the faster guys. So I told them two weeks out that Thursday of hell week is going to be a 10km session just come prepared. We got, I think the turnout was 10-20% more because people just enjoyed the challenge they knew what was coming and the completion was huge. We had pretty much everyone who turned up made the distance that they set out to do so it was awesome to watch.

Totally. It is amazing when given that challenge. When I first set up, our Wednesday session our red mist session has only been running maybe for the last three years out of five at the current squad has been running. So **when I introduced it I wasn't sure it was going to be popular at all** because I thought if I advertise its going to be hard people are not going to want to turn up and do a hard session. In complete contrast to that it is now our most popular session of the week because people see the value in it they can sort of see how it complements the other technique work that you do during the week and like I was saying before it is important to get that balance right. Drills and pure technique work are only going to take you so far just like pure fitness work or thrashing up and down the pool will only take you so far. It is important to get that nice balance between the two and open water skills as well is necessary.

You touched on some of the products that you have available through Swim Smooth where do you recommend most people start?

It's a good question. Certainly having a browse at the swim, our main website we have a lot of free information on there for people trying to identify what they can do to make a bit of a difference. Each week we blog through our feelforthewater.com website which we currently have 66,000 subscribers on that so it is a huge blog list that goes out every Friday afternoon. We send out one tip a week basically on that just too sort of; mainly something I have been working on over here in Perth and we decided that would be a useful focal point for people to work on over the next week.



So those are some sources of free information. We have also got the swim types websites, swimtypes.com which is worth looking at and sort of trying to identify your type. Looking at the videos we have just put up a new YouTube clip for each of the swim types which is like a summary of each of the types just showing how the strokes interact and you will see that you recognise yourself in one of those swim types. In terms of the products we still have the Swim Smooth DVD box set which contains an 8 week training program in there. We have a more recently released the catch master class DVD which primarily looks at the catch phase of the freestyle stroke and that is all shot over here in Perth in beautiful HD footage. We also have a learn to swim DVD for those people that are just purely new to swimming and have never swum a stroke of freestyle before. We have water proof training plans on the website which are primarily focused at tri-athletes building up for either sprint distance or half or full iron man distance triathlon. We then also sell a select range of training tools primarily from Finesse which we have tried and tested. It would be very easy to turn the whole website into a swim shop but we want to ensure that the type of products that we offer are out there and are products that I have personally used, my squad have personally used on a day to day basis and they are products that work. You will notice **that we don't have the complete range of certain manufacturers stock** and it is purely only because we are putting out there what we truly believe is working for the swimmer.

That is fantastic. I think that is the best way to prove something works is to just go through it yourself and only teach what you do. That's exactly what you guys do which is just fantastic.

Yeah excellent.

So feelforthewater.com for weekly free tips and then you have got your swimtypes.com to find out which type of swimmer you are and then what plan of action to take to go and improve it. Then Swimsmooth.com has got the range of other DVD's and the toys and accessories that you promote there.

That's right and that has a whole section swimsmooth.com/knowhow and it is basically a resource if you like for swimmers wanting to know general information about what makes an efficient freestyle stroke and give them some tips and ideas on how to improve their training aspect etc. Really the book which we just published through a publishing company Wiley and Sons from New York that is very much a bringing together of all the resources; it includes the swim types it includes our focus on technique



and training and open water skills etc and it also has a very comprehensive training program and schedule at the back of the book in the appendix there which encourages. We have basically gone through and identified six very best warm up sessions, our six very best build sets, our six very best endurance sessions and the swimmers are then encouraged to select one of the six warm ups, one of the six build sets, one of the six main sets and piece them altogether. In theory that should give you over 5000 different training sessions, all the different combinations. Each of those six swim sessions, six warm ups there is one specifically tailored towards the Arnies, one specifically tailored towards the Overgliders etc etc so we are getting some really good feedback about that. It has only been out two weeks and it has already gone to its second print run and sold out on Amazon so we are very happy about that. But check it out on the swim smooth website we have still got a few copies over in the UK to post off to people.

Awesome. If anyone listening to this wants to buy a copy of any of your products then just send me an email at effortlessupport.com and I will throw in a bonus. It might be hell week workouts or I will put together a list of things that I can add in as a bonus for anyone who buys any Swim Smooth products because I think you guys are doing a fantastic job. I have watched a lot of your YouTube videos as well and I see you do a lot of really good analysis of tri-athletes strokes and you just put them up and talk people through some of the different things that they are doing. They are really educational so I think you guys are doing such a great job and I highly encourage everyone to go and look at your website.

Thanks very much Brenton that is very much appreciated and mutual respect to yourself mate with what you are doing over there in Victoria.

Thanks Paul and if anyone wants to get in touch with you how do they do that?

I mean they can contact me directly through my email address which is simply paul@swimsmooth.com which is probably the easiest way but we also have a chat forum as well. So all our registered coaches etc all contribute to that forum which is just simply swimsmoothforum.com which is a good way to ask questions within the swim smooth community if you like. We have also got, you can follow us on twitter as well; [swimsmoothpaul](https://twitter.com/swimsmoothpaul) is my tag. I am getting quite into Twitter these days, probably a good source of putting up of ideas that I maybe have had over



a training session or occasionally we talk about things like the Tour De France and current affairs and those sorts of things but it is a great medium that is for sure.

Awesome thanks again Paul it has been a pleasure chatting with you.

Not a problem at all, thanks Brenton.

