

Dear Parents and Swimmers,

Hello to you all. My name is Gillian Powell, and I am a registered personal trainer qualified in rehabilitation support, injury prevention, and functional exercise, qualified teacher of competitive swimming, mother of twin 14-year olds, university graduate (BSc. Honours) specializing in anatomy and physiology, and former competitive swimmer. I develop, implement and run the dryland program, teach the mini squad at Springwood, and assist with bronze and silver squads.

Since starting in January 2017 I have done many hours of research regarding modern swimming dryland programs for various age groups, developed and implemented a pre-swim session/pre-race **warm up routine** that 'wakes up' the muscles and nervous system and gently increases joint mobility, preparing the swimmer for action in the pool (the dynamic warm up is known by some already, and is posted on the Mountain Swim website), and developed and run the **dryland program**.

After much careful consideration, research and planning, I have developed the dryland program with the goal to concentrate mainly on three areas: **shoulder stability and injury reduction, "core" strength, general strength**. For all components of the program, swimmers will be working on exercises appropriate for their age/development, taught proper technique, required to use proper technique, encouraged to push themselves to an appropriate level whereby they feel challenged but are able to maintain proper form for all exercises, and required to communicate with me regarding any physical problems they may be experiencing, whether they be illness, discomfort, or pain from an injury.

All exercises that I program in are able to be **progressed from a basic level**, such as body weight exercises, raised press ups, or extra light resistance band, through multiple steps of increasing difficulty and challenge, so that all swimmers regardless of age or ability can be properly accommodated. A swimmer may only progress to the next level of challenge once they have mastered the one they are currently working at for any given exercise, and are able to keep proper form for all repetitions. For some, this could also mean starting with lower repetitions at a basic level and simply building up stamina, adding on more repetitions. This is particularly the case for younger swimmers.

The **shoulder stability and injury reduction** portion of the dryland program involves using resistance bands and other exercises to work on strengthening the "upper back" and shoulder complex muscles that so often become overpowered by the stronger chest and latissimus dorsi muscles in swimmers, leading to the ball not sitting in it's proper place in the socket, development of inflammation, and the dreaded swimmer's shoulder. It is a widely held thought that by working on these exercises and increasing strength to counter the strong internal rotators, the shoulder is better able to remain in a proper position whilst swimming, decreasing the likelihood of inflammation development, or slowing its development. Since well

over half of swimmers report occurrences of shoulder pain, any work we can do to reduce this is well worth the effort! You'll find a good video regarding this subject here: <http://www.usaswimming.org/DesktopDefault.aspx?TabId=1551&Alias=Rainbow&Lang=en>

The importance of **core stability and strength** for swimming success is something that cannot be emphasized enough. All movements in swimming transfer load through the core, and the strength of pull and kick, balance and stability in the water, are more dependent on core strength than limb strength. Without adequate core strength, strength of the limbs "leaks" and is not transferred into stroke power. More on this here: <http://www.yourswimlog.com/core-strength-will-make-faster-swimmer/#>. I have definitely noticed a marked increase in the core strength of consistent participants.

Starts and turns are important parts of races, and make up an extremely large portion of sprints. By working on **general strength**, swimmers will not only increase their kick and pull strength, but will be able to have stronger starts and pushes off the wall in turns. In a sport where finishes are often determined by split seconds, this can mean the difference between multiple places, or attaining a pb. Younger swimmers will work on this aspect by doing body weight exercises, as well as playing active games/doing relays. Teen and older swimmers will also start with body weight exercises, and be given the option to add small increments of weight, such as by holding a light kettlebell or dumbbell, at an appropriate time. They will also work on some plyometric jumps, but only within their appropriate age and development abilities. Relays and team challenges can also add fun and interest for all.

During dryland training I speak to the swimmers about **stretching**. Unfortunately, I am not present after the swimming sessions to go through a stretching routine with them and ensure that they are doing the stretches properly. However, all swimmers should be doing static stretches multiple times a week, specially focusing on muscles that become overly tight in swimmers. These are the chest, lats, upper trapezius (between shoulder and head), hamstrings (back of legs), and often the other leg and hip muscles, such as the quads (front of legs), glutes (hip/bum), and adductors (inside of legs). Each stretch should be held for 30-60 seconds, be comfortable with a light stretch, and never be bounced or forced. The stretches need to be performed when the muscles are warm, never cold, but also not when they are really fatigued such as straight after a big race or massive swim session. Do your warm down, refuel with some good food and water, and then do your stretches while still warm. Or, set aside time at other times during the week, do a good whole body warm up, then do your stretches. Before bed can be a nice time to stretch. Ask your coaches for stretches, or search them online from good sources. I will do as much as I can to pass along info as well. Here's a few demos: [www.youtube.com/watch?v=Px9NBP4TzNs](http://www.youtube.com/watch?v=Px9NBP4TzNs)

Besides having implications for swimming performance, participating in a dryland program has **other great benefits**. Swimming, whilst imparting fantastic cardiovascular gains, does not help in **developing bone density**. This occurs during impact exercises (running, jumping, catching an object) and resistance training (body weight or otherwise). The bone density of children and teens has a large impact on their future bone density as adults ([www.osteoporosis.org.au/sites/default/files/files/Exercise%20Fact%20Sheet%202nd%20Edition.pdf](http://www.osteoporosis.org.au/sites/default/files/files/Exercise%20Fact%20Sheet%202nd%20Edition.pdf).) Also, especially for the younger swimmers (approximately under 14), playing running games and learning movement patterns will help them learn how to control their body both in and out of the water and, in this way, help with the development of good swimming technique.

### **Rules and Requirements:**

1. Come wearing **joggers and appropriate clothing**, and have a full **water bottle**. Also, we work in the open, so wearing **sunscreen/hat** is advised.
2. Bring a **dryland kit** consisting of yoga mat, skipping rope, and flat resistance bands. These can be purchased inexpensively at Kmart (pack of 3 bands of various resistance, thin mats), or Target (only 1 resistance level). Bands can also be purchased at physiotherapists.
3. **Pay attention to instructions**. We can only get in the exercises if I don't have to repeat everything 10 times.
4. **Keep good form** in the exercises, and work at a level whereby you can do as many of the reps as possible. If you have to stop at 14 of 15, that is fine. But if you are struggling at 10, the level of difficulty needs to be reduced. Ask me if you are unsure how to do that! Working at too high a difficulty level can lead to injury, and we certainly do not want that!
5. **Always let me know** if you have an injury/pain/discomfort/illness/headache, etc. I cannot tell what is going on in your body! I will change/modify the exercises you are doing/decrease your work/have you stop.
6. **Challenge yourself!** I can only motivate you so much, and the rest is up to you. Listen to your body. If you can safely increase the intensity that you are working at by running faster/jumping higher/asking me for an exercise modification, then please do so.
7. **Do the exercises required**, properly. There is a reason for each and every one of them. The shoulder exercises sometimes may seem repetitive and similar, but they are as important to do as the fun running around.
8. If you need **clarification** for anything, just ask! Perhaps you are doing a new exercise and don't quite get it, or have a new progression, or have simply forgotten. What is important is that you do them properly, so ask me.
9. **Slow and controlled movement** for all resistance exercises. Usually this means counting a slow two one way, and slow two back to the start position. This is important for injury prevention, but also so that you get the full benefit of the exercise.

10. I'm working really hard to develop and deliver this program, all for your benefit. **Please be respectful** and treat me and others as you would want to be treated. If you have had a hard day, I don't want it taken out on me or on any of the other participants. Many thanks for your help with this.
11. I bring equipment to use for the exercises, and **need help unloading this from my vehicle, and packing up afterwards**. I would appreciate it if everyone could help with this to make it as quick and easy as possible. Only carry something that is not too heavy for you. Leave the heavy stuff for me or older swimmers who can handle it. Once again, no injuries are needed! However, if I do not get help, I will be unable to bring as much equipment.
12. I need **constructive feedback** to help develop the program. Please let me know if you particularly liked/didn't like an aspect of a program. Offer suggestions and ideas, such as games that may be incorporated, better use of space, etc. If something wasn't tough enough/was too tough, I'll modify it and retry. As everyone gets down the exercises, and the way the program is structured, everything will start to run smoothly and like clockwork.
13. **Springwood swimmers and parents**: I will be parking at the lower parking lot and would like the swimmers to meet me at the park below the pool, easily accessed from the lower parking lot. Dryland training takes place in blocks of time, broken into shoulder work, core work, and general strength/games/running.
14. **Glenbrook swimmers and parents**: I will bring my car as close to the entrance as possible for unloading. Also run usually as shoulder work, core work, and general strength/games/running.

Well, that is a lot to read, so I think that I'll stop there. If you see me, please introduce yourself to me/remind me of your name. I look forward to having your swimmer/s in the dryland program. Please register through the Mountain Swim website.

Kind regards,

Gillian