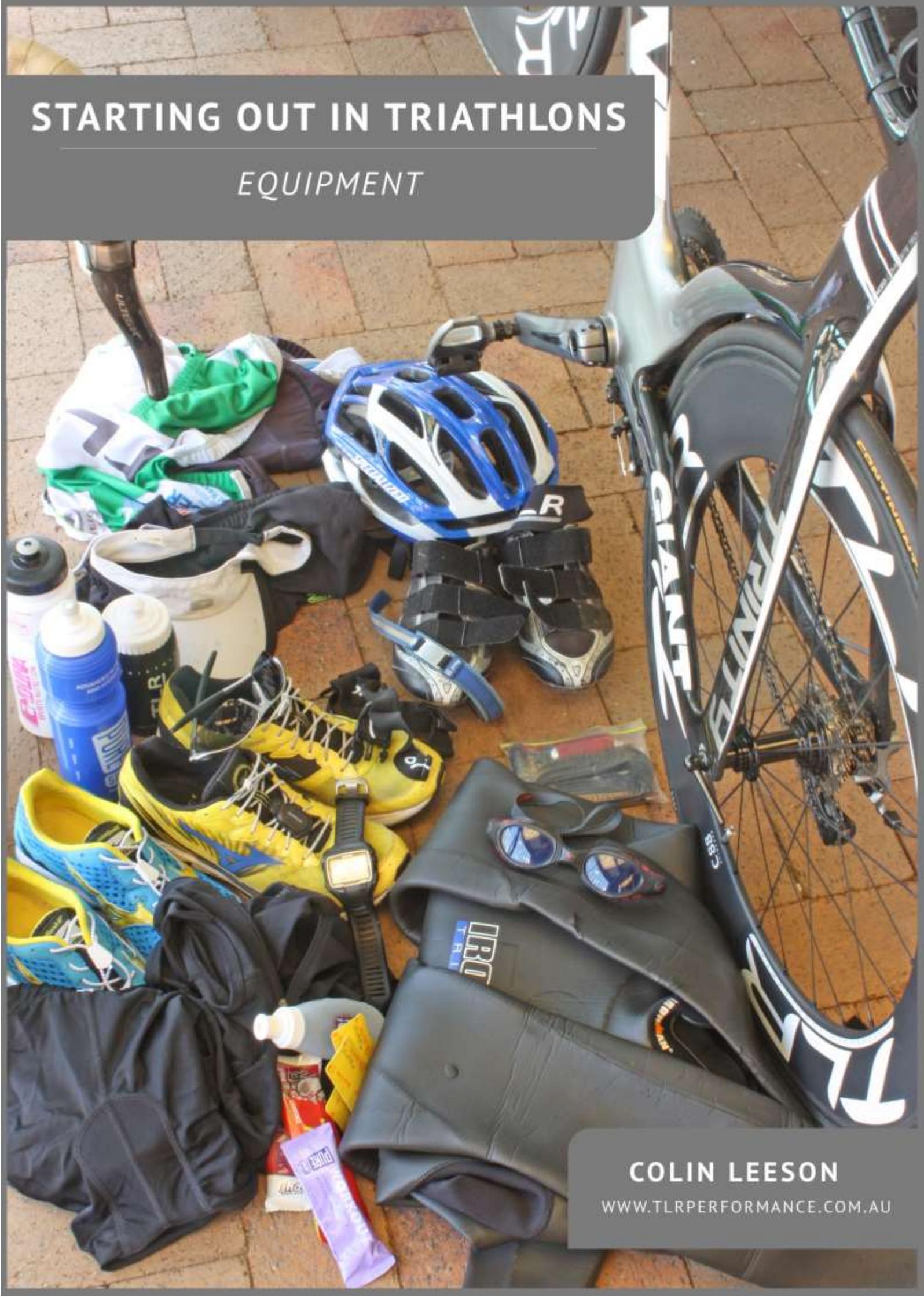


STARTING OUT IN TRIATHLONS

EQUIPMENT



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About the Author

With 30 years' experience in cycling and triathlon, Colin Leeson is a leading authority in affordable, quality performance components for the cycling and triathlon industry.

Colin is the owner and manager of the brand **TLR Performance** which supplies a broad range of Cycling, Running and Triathlon products. He has a passion for sport and loves competing in triathlons and sharing his knowledge with others.

Introduction

Triathlon is a unique sport combining the three disciplines of Swimming, Cycling and Running. Triathlons come in a variety of sizes and difficulties ranging from introductory events for first timers, through the sprint distance events and up to the ultimate endurance event the "Ironman Triathlon".

Many people come to the sport of Triathlon having previously focused on one of the three sports. In my case this was both cycling and running where, as a teenager I was a very competitive runner and keen recreational cyclist. It wasn't until I was in my mid 20's that triathlons started to become more well-known and after being invited to come watch a friend at this Australian event called "Noosa Triathlon" I decided to form a team and have a go for myself. Well I went in the event and was immediately hooked and have been doing triathlons ever since.

Starting the TLR Performance brand gave me the fantastic opportunity to contribute to, and make a living out of a sport that I love.

In the "**Starting out in Triathlons**" series of eBooks I will share my experiences and take you through the basics of triathlon and cover topics which will help you understand how a triathlon event works, the equipment you will need including where best to spend your money, some of the Gotcha's you may come across, training programs and a multitude of tips.

I hope you get some real value from this series and hope to see you in a triathlon event somewhere, sometime.

Colin Leeson

Table of Contents

Triathlon Equipment.....	4
The Bike	5
Long Term Bike Plan	5
The Road Bike	5
The Time Trial Bike	5
Choosing Your Early Bike	6
Groupset.....	6
Frame.....	7
What to Spend?.....	7
Bike Accessories	8
Cycling Shoes and Clipless Pedals.....	8
Aero Bars	9
Wheels.....	10
Renting wheels	10
Helmet	11
Clothing.....	11
Tri suit.....	11
Wetsuit	12
Run Shoes	13
Elastic Laces	13
Accessories	14
Garmin 910 XT	14
Race Number Belt.....	14

Cover: Some of the equipment needed by a triathlete.

Triathlon Equipment

So now you know a little about triathlons. You may have completed a full triathlon yourself or been part of a team and now you want more. It is time to think of the equipment you will need to become a regular triathlete.

Right up front I will say that triathlon is not a cheap sport.

The equipment you need for a triathlon CAN cost a lot of money and aside from the obvious costs of swimming, riding and running gear, the costs to compete in triathlons include:

- Event entry
- At times travel and accommodation for events
- Nutrition products for training and racing
- Pool and/or coaching fees
- Club and Triathlon association membership

The good news is there are plenty of other sports and pastimes that cost a lot more money than triathlon and very few of these sports provide the health benefits that involvement in triathlon does.

The other piece of good news is that the costs don't have to be exorbitant and can be staged as you progress in the sport.

In this eBook I will share some of my experience in progressing through the sport in a cost effective manner by purchasing items that are good enough to do the job at the point where you are in the sport. I will try to highlight some of the pitfalls of going too cheap and ways of avoiding the large expenses.

The Bike

The biggest equipment expense for triathlon is of course your bike. Bikes in a typical triathlon transition area range in price from a few hundred dollars through to, in Australian money, something like \$15 000 (or the price of a small car). The fact is you never need to spend that amount of money and can compete quite competitively with a much cheaper bike.

Long Term Bike Plan

Ultimately if you continue in the sport you will likely end up with two bikes (at least).

These will be a road bike which is used for most of your training and a Time Trial (TT) bike which is used for racing and limited training. I was a triathlon age group competitor for over 15 years before getting my first TT bike so I can testify to the fact that a road bike will be adequate for many years in the sport.

The Road Bike

The picture to the right is my current road bike. It is made from carbon fibre and has a fairly standard road shaped frame. You will have seen many bikes of this type around. This bike has a couple of non-standard items including the carbon wheels which make it quicker.



In a later section we will look at the accessories you can put on your bike to make a difference in triathlons.

The Time Trial Bike

The Time Trial bike is quite different to look at than a road bike. You can see on my bike to the right that the handlebars are the largest difference. They are designed to have the rider in the most aerodynamic position possible for the maximum time. The seating position is a little further forward than a road bike and the frame is flat and aerodynamic making it slice through the air giving a fast ride.



This bike has quite a few accessories including the drink bottle mechanism behind the seat, the Gel bottle on the top tube and the deep dish wheels

Choosing Your Early Bike

New people to the sport of cycling or triathlon have a difficult decision to make because in the early stages they won't know how involved they will be in the future. I have seen people spend a lot of money on a bike which is used for just a few rides before being left in the shed or sold. I have also seen people who spend a small amount of money on a bike that is really not good enough for their needs after a couple of races.

For me there is a 'sweet spot' for your early bike purchase and a couple of guidelines to find and justify it.

A description on a couple of terms first:

- The "group set" is the name given to the moving components on a bike. These include the brake and gear mechanisms and the bearing sets for pedals and steering etc.
- Bike frames are made from a variety of materials including: Steel, Chromoly, Aluminium, Carbon Fibre etc.

Groupset

My thoughts are that the moving components on a bike are the things that will be doing the work so I want them to be as good as I can afford.

The Shimano brand of products is a good example of the choices for the groupset.

Shimano has a range of groupsets as follows (most expensive first):

- Dura Ace
- Ultegra
- 105
- Tiagra
- Sora
- Claris

Note: Shimano have electronic changing versions of Dura-Ace and Ultegra which are called "Di2"

My thoughts are to try to get one of the top 3 models and if possible the "Ultegra" groupset.

(Dura-Ace is quite a deal more expensive than Ultegra however Ultegra is not much more expensive than 105.)

The Di2 electronic gear changers are becoming cheaper all the time and one can already get some good Ultegra Di2 bikes in Australia for about \$2500

Frame

The majority of mid and high end bikes now have Carbon Fibre frames because the material allows them to be light and strong. Carbon fibre frames come in a range of qualities which affect their stiffness and weight. The best quality, and therefore most expensive, frames have a manufacturing method which allows the carbon to be much thinner and still as strong, making them lighter and often stiffer.

For my ideal cheap starter bike I would still like to aim for a carbon frame but realise that it will be slightly heavier and not quite as stiff as something several thousand dollars more.

Depending where, when and how you buy this first bike you should be able to get a pretty decent racing bike with a carbon frame and good groupset for somewhere between \$1200 - \$2500.

This bike will last you for many years in cycling and Triathlon events.

What to Spend?

As you ponder spending this amount of money here is something I have used over the years to justify my spending on bikes.

I live in Brisbane, Australia, and spent 12 years commuting to an office in the City. During that time if I was to catch public transport it would cost me something like \$1800 a year in public transport costs. I realised fairly quickly that if I used my bike to commute I could 'pay' for a good bike every year or two by the money I saved by not taking a bus.

Another justification you may use is the cost of the bike vs. membership in a Gym etc.

There are lots of bike brands and bike shops around. My advice is look around and find a good one.

Note: Consider having a 'bike fit' when you purchase your bike as having the bike properly set up to your body makes an enormous difference to your riding.

Bike Accessories

Now that you have your first decent road bike you can add some accessories to make it faster for triathlon use. Technology changes regularly and gains made by components improve all the time however there are some basic accessories that can give substantial benefit and we will look at some of the main ones now.

Cycling Shoes and Clipless Pedals

One of the best ways of improving bike performance is through the use of bike shoes and 'clipless pedals'. These are commonplace on many bikes now and chances are you have some already.

Bike shoes have a stiff sole and usually Velcro straps in place of laces. They have a "Cleat" attached to the bottom of the shoe which connects to the pedal with a 'click in' and 'twist out' action.



There are quite a few advantages in these pedal / shoe combinations:

- The main advantage is the solid sole on the cycling shoe. This sole allows the full pressure of the foot pushing on the shoe to be transferred to the pedal and thereby contributing to the momentum of the bike. Compare this with a softer sole shoe where the flex of the shoe sole causes loss of this potential pressure and a lack of efficiency.
- With shoes that are "attached" to the pedals no energy is lost due to keeping feet on pedals. If you think about it when you are riding a bike with normal pedals you are pushing hard down with one foot but at the same time you are also pushing with the other foot so it doesn't come off the upward moving pedal. This is another very inefficient action.
- In fact with shoes clipped to the pedals the cyclist has the ability to pull up with the upward moving pedal at the same time as pushing down with the downward pedal. This gives an even better energy transfer to the bike.
- A clipless pedal allows for easy connection to the bike. This action is a great improvement over the older method of "Toe Clips" which were a bracket attached to the pedal extending up and over the front of the foot. The bracket holds a strap which runs around the middle of the foot and requires manual tightening once the cyclist is moving. The difficulty with this system is when the cyclist needs to stop, he or she has to reach down and manually release the straps. This caused lots of people to fall off their bikes.



Learning to use clipless pedals takes some effort. The action to clip in and twist out is easy enough to learn but forming the habit of twisting to remove the foot is the thing people take the longest to master. After teaching people to use clipless pedals for many years I find that the most likely time for a person to have a problem is after a few rides. At this point they have learnt the clip in and out action and no longer need to concentrate specifically on the movement however the habit hasn't formed for them to instinctively remove the shoe and they simply forget. Most cyclists using clipless pedals say 'everybody falls once'. My advice is find somewhere safe to form the unclipping habit e.g. on a quiet path or on some firm grass rather than on a busy road.

One last comment on cycle shoes: Shoes come in several varieties which are intended for different purposes. These include mountain bike shoes but for the purpose of this triathlon focused eBook we will just look at Road Shoes vs Tri Shoes.

- Road shoes are designed to be firmer on the foot and usually have three straps. Often one of the straps has a ratchet tightening mechanism.
- Triathlon shoes are designed to be easier to put on while riding the bike and have a single wide Velcro strap. They don't quite have the support of a road shoe so wouldn't be as good on a hilly ride for example.

(Other eBooks in the series cover putting shoes on while riding in a triathlon)

Both types of shoes will be fine for your early triathlons so my advice is choose a pair that will suit the majority of your riding.

A set of shoes and pedals will cost something like \$200 - \$400.

If you don't have them already, they are a relatively inexpensive way of making a significant improvement.

Aero Bars

The second best addition you can make to your bike for triathlon use is with a set of Aero Bars. Aero bars allow the cyclist to ride in a more aerodynamic position therefore using less energy and getting better speed. Aero bars can be added to most bikes and are relatively cheap to purchase. A cheaper aluminium set cost a little under \$100 and the more expensive carbon sets can cost several hundred dollars.



For a value for money accessory to add to your bike, I believe Aero bars are the best.

Like the shoes and clipless pedals, aero bars are different to ride with and take a little to get used to. Start out cautiously and by the end of your first ride using them you will begin to feel pretty comfortable.

Wheels

Wheels are arguably the accessory that gives the best advantage. A set of deep dish carbon wheels give the following benefits.



- Weight reduction.
Carbon wheels are significantly lighter than alloy wheels which add to overall weight reduction of the bike. Any weight you can take off the bike makes riding easier and faster so it is a valuable thing to do.
- Aerodynamic advantage.
The aerodynamic shape of a deep dish carbon wheel is designed to improve airflow across the wheel making it cut through the air cleaner resulting in increased speed.
- Rolling ability.
A good carbon wheel set will have quality hubs and bearings which make the wheels roll easier than a regular wheel. For a triathlete this results in greater speed and less energy to produce this speed.
- Centrifugal momentum.
An advantage of a deep dish rim that is not very well known is the centrifugal force that is built up in the wheel. This force allows the rider to keep up momentum on the bike with less effort. The full disk carbon rear wheel is the most extreme example of this phenomenon however a deep 80mm + dish wheel will exhibit similar behaviour. These wheels typically take a little more energy to get up to speed but once they are at speed they are easy to keep there.

...and, the best reason for getting a set of carbon wheels is they make your bike look fantastic 😊

It is clear that carbon wheels are an accessory that gives a lot of benefit to the bike however it is not a cheap upgrade with a set of name brand wheels costing in excess of \$4000 for the pair.

It was while I was looking for an affordable set of wheels for my bike that my brand TLR was formed. I saw a need for a good value alternative to the expensive brands for age group triathletes just like me. The TLR brand now has an attractive range of quality wheels at a value price.

See the TLR range of carbon wheels and other products at www.tlrshop.com

Renting wheels

Carbon wheels are particularly beneficial in a race and an option for those not ready to purchase a set of their own wheels is to hire some race wheels for the event. Wheels can be hired from some bike stores or through online wheel hire businesses all around the world.

At TLR we saw this need in Queensland and have set up TLR Race Wheel Rentals for the Australian market.

More information about TLR Race Wheel Rentals at www.tlrperformance.com.au/rental/

Helmet

Helmets are an area where research has made significant gains in the last few years. New designs seem to come out fairly often and the designs of helmets vary greatly but the concept of the helmets is to make the air flow over the rider as smoothly as possible.



The picture is pro-triathlete Jordan Rapp demonstrating perfect use of the aero helmet. You can see the smooth line across his head and down the back.

Cycling theory says that an aero helmet can give quite a good improvement in performance.

An aero helmet will cost over \$100 and up to \$500. The thing with aero helmets is they are really only ever used for races, so the benefit for value makes it lower on my list and it comes in fourth place.

Wrap up...

The good thing about all these items is you can accumulate them as your budget allows and you will improve your sport little by little along the way.

Clothing

Tri suit

At some point you will get a Tri suit to use during triathlons. They are tight fitting lycra items of clothing which include a bike short like pant and singlet like top. They come in both one-piece and two-piece kits and usually contain a couple of pockets. Because they are tight fitting they can be worn during the swim without causing any drag in the water. Tri suit pants come with a range of chamois' depending on the length of the event they are designed for, i.e. a sprint distance tri suit has a very small chamois while a long course tri suit will have a thicker one.

Tri suits will cost you over \$100 and some brands will be several hundred dollars.

They are a good investment as it makes the transitions much easier when you can wear the same clothes through all legs of the race.

Wetsuit

A wetsuit is one of those things that depend on where you live and the temperature of the water. Where I live in Queensland, Australia there are very few events that need or allow a wetsuit so it would be further down my list of items to purchase. That being said, the price of wetsuits has come down over the last few years and they are quite affordable now.

If the water is cool enough wetsuits are allowed in triathlon events. A triathlon wetsuit is specifically designed and is different from a diving or surfing wetsuit and there are restrictions around the types of wetsuits which are approved for triathlon events. Wetsuits are great to swim in as they add a little buoyancy and make the swim stroke much more effective. They can rub when worn particularly in salt water and the use of Glide lubricant around the neck, wrists and ankles is highly advised.

I learnt a great trick for putting wetsuits on only a year or two ago. The trick is to put your foot in a plastic shopping bag first then slip your foot, with the bag on it, into the wetsuit. The bag allows your foot to slide into the wetsuit really easily then you just pull the bag off your foot!!



Wetsuits look pretty tough but they do need to be looked after. Take notice of the care instructions on your wetsuit and follow them. A few points I would make are; be sure to wash them thoroughly if swimming in chlorinated water and be careful entering and exiting water where there are sharp stones or shells as they cut the wetsuit material very easily.

I see wetsuits around these days from just over \$100 for the cheapest ones right up to about \$1200 for the high quality name brands. This means there are plenty to choose from and there is sure to be one to suit your budget.

Run Shoes

Shoes are another one of those personal preference subjects with many brands and types available. Of course my advice is to shop around and find a shoe that works well for you.

It has taken me a while to get into this position but now I have two pairs of good running shoes both of which are Mizuno brand.

- My main running shoes are Mizuno Wave Rider 16's. They are a good trainer shoe because they are cushioned enough for long runs. I use these for most of my training and for races ½ Marathon and longer. They weigh 298 grams each.
- My second set of running shoes are Mizuno Wave Ronin 5's. These shoes are very light race shoes and are intended for shorter events say 10k or less due to the minimal cushioning in the shoes. I haven't yet but may use them in a ½ marathon if my feet are feeling really good. They weigh 214 grams each and feel much lighter on my feet.

You can comprehend the benefit of the weight difference when you consider you are lifting almost 100 grams extra every step you take.

Just think every 11 steps wearing the heavier of my two shoes means lifting an additional kilogram and in a 10k run where you are likely to do somewhere between 8000 and 10000 steps you will lift an additional 800+ kg's over the course of the run because of the shoe on the end of your foot!!!

This shows very clearly the value in getting a light set of race shoes. If you have the budget to buy both sets of shoes at once go for it. If however you need to get them one at a time, get the cushioned pair first and put the race shoes on your list of things to get at some stage.



Running shoes typically cost between \$100 and \$200.

Elastic Laces

Elastic shoe laces are a must for triathlons and are a very cheap and effective way of reducing time in a triathlon transition. You can see my laces on the shoes above. They are beneficial in that the shoes can be put on very quickly and you won't have the problem of laces coming undone during a race. They are a cheap addition to your kit normally costing less than \$10

Accessories

There are a few things that I would class as ‘accessories’ that you would use for triathlon and in this eBook I want to spend a little time on just two of them.

Garmin 910 XT

The first is a “watch” like the one to the right. I call it a watch but it is more like a trip computer from a car.

This is a Garmin 910 XT and it is one of my most surprisingly useful purchases. I expected that the Garmin would be valuable for me as I started training for my first Ironman triathlon but quickly found it to be enormously useful for training and racing.



This device has modes for swimming, riding and running plus a multisport mode that lets you record the full triathlon. Within each mode there are many statistics that are collected and are able to be displayed as you wish. (I believe there are over 100 differing statistics.) Additionally when you return to your computer you can upload the data and look through a lot more stats and information to review your performance.

For me the biggest benefit with this is in running where I watch my pace, km split times, heart rate and total time. I also have an alarm sounding every 10 mins to remind me to have my nutrition.

There are a number of devices like this available from several brands that do the same type of job. Personal preference and particular benefits will help you choose one. At about \$400 it is not a cheap investment but I would say “surprisingly worth it” if you have the money to spare.

Race Number Belt

The second item, and last item in this eBook, is what I consider to be the best value item you can buy! The race number belt.

It is simply an elastic belt with a clip to close it and a couple of connectors for your race number. It makes putting your race number on a breeze and gives options for spinning the number to the back if it is hot and for storing extra nutrition items if you get a “race fuel belt”. Without a belt you are stuck using pins to fasten numbers to your clothes which flap in the wind and drag in the water. For about \$10 these are a fabulous investment.



Find out more information about triathlons in the rest of the “Starting out in Triathlons” series of eBooks