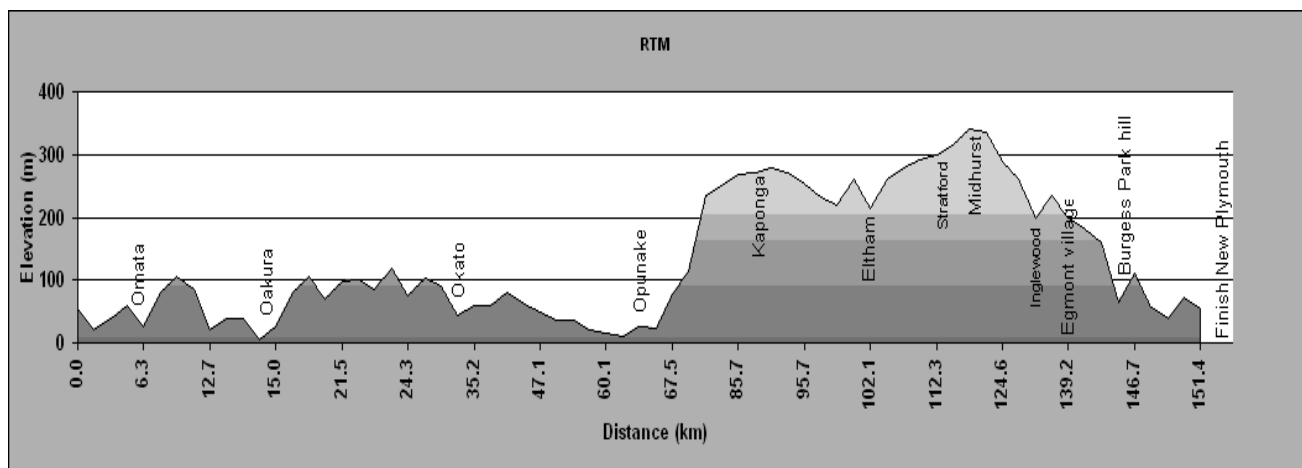


Yarrows Taranaki Cycle Challenge

I have been asked to put together a training plan for the Yarrows Taranaki Cycle Challenge. As a professional coach and sport scientist I know there is not one simple plan for all, but I can give you an idea what you will need to do to get round a sportive like the Yarrows Taranaki Cycle Challenge. The specific plan I have been asked to build is for the Weekend Warrior so this is geared to the riders who are time poor in the week but have a few hours at the weekend to enjoy the club run and get some miles in as summer gathers momentum.

Let's start with a brief breakdown of the demands of the event. It is a 150 km course with the first 65 km being steady rolling terrain to get you all warmed up. At approximately 65 km there is a rise of just over 200 meters taking you up onto a plateau for 30 km where there is a second climb of just over 100 meters to the highest point at Midhurst, then the course takes a mostly downward turn apart from a couple of short rises at Inglewood and Burgess Park Hill.



The main points to take into account are that it is a long course so endurance and efficiency (ability to burn fat for fuel) is crucial - the more fat you can burn the more glycogen you will spare which is needed for fuelling the higher intensity efforts required to ride over the tougher hilly sections of the course. If you don't train your aerobic metabolism and increase your ability to burn fat through long steady aerobic rides, by the time you reach the tough sections towards the end of the route you will have run out of the fuel (glycogen) and the ability to actually ride the steeper hills on the course.

You can also run out of energy or “bonk” if you fail to pace yourself and eat correctly. This type of bonk can also be seen in the European Sportive events where large numbers of participants burn up all the high energy fuel by riding too fast on the flatter sections, perhaps trying to stay in a group of higher ability riders whilst failing to take in adequate nutrition. A good tip for first timers is to back off on the flatter sections and get your food and drink in 60-90 grams per hour of carbohydrate can be consumed as a drink mix or as energy gels and bars, along with at least 1 litre per hour of fluid. Pacing and nutrition should be practiced during your long training rides, the last thing you want to do is leave this to the day of the race, so start experimenting with different energy foods and your pacing.

I have focused a great deal on strength in the plan because this plan is designed for the full time worker who wants a challenge of such a demanding ride. These people, from my experience, are not racers, but cycling enthusiasts, and the biggest weakness that I find with this set of riders is a lack of strength. This is why I have incorporated a great deal of strength into the plan. But make sure you use your common sense - this plan is just a general guide. Participants with past knee trouble may have problems with this so remember if you have any pain or discomfort at any time during this training stop and consult your doctor.

The inclusion of the longer aerobic training days with focus on zone 2 and zone 3 will build endurance. The zone 3 efforts will strengthen the aerobic muscles and cause the intermediate muscle types to use more oxygen, which all improves endurance and the ability to complete the distance comfortably. Finally, the higher intensity zone 4 intervals will enable a bit more speed on the climbs, as the body adapts to produce less lactic acid for a given power output.

This type of structured training is a good base plan for any confident cyclist in good health and with a good level of cycling fitness. For serious racers who are looking for a more competitive edge, an individual plan with more speed work may be more suitable. If you would like further advice on this, or any other issues regarding training for events, then please contact me. I will be based in New Plymouth throughout December and January.

So that's as basic as I go, we will focus the next 11 weeks on strength and endurance and then build in some muscular endurance using a few tricks of the trade to get as much fitness gains as we can with limited training time.

Training intensity

Ok. Firstly you need to know which intensity to train at to get the correct training response from each energy system, so we break the training down into heart rate (HR) zones (or based on feel if

you don't use a HR monitor). However a HR monitor is a very useful tool for training and for the prevention of over training, and to make the most of your limited time. If you would like advice on HR monitors and Power Meters (devices that measure power output as well as HR) then please get in touch.

I have simplified the aerobic zones (there are many different training zone calculation methods) shown below, calculated on percentages of max HR. To calculate your max HR if you don't already know it, subtract your age from 220. For example for a 38 year old person, $220 - 38 = 182$ beats per minute. If you are not using a HR monitor then you can evaluate the intensity on feel.

Training Zones: As a percentage of maximum Heart Rates		
Training zone	Benefits	Intensity Level (Max HR %)
1	Recovery (very easy)	50% - 60%
2	Aerobic conditioning (easy to moderate)	60% - 70%
3	Increased efficiency (moderately hard)	70% - 80%
4	Increased muscular endurance. Maximum intensity that can be sustained for 1 hour. (hard)	80% - 90%
5	Maximal aerobic power. Maximum durations of 3 to 5 minutes (very hard)	90% - 100%

Now, onto the training. I have broken the 11 weeks down into three, 3 week blocks followed by a 2 week pre-event block. I will work around a "2 weeks on, 1 week recovery" period for the first three blocks where the aims are strength adaptation and endurance, strength and efficiency progression. Strength maintenance, endurance and muscular endurance will come in blocks one, two and three respectively. The final two weeks will be a tough final overload followed by a taper week leading up to the event. Enjoy.

Objectives	Start the core stability work and complete all the prescribed exercises whilst incorporating a regular stretching routine		
	Increase leg strength with on bike weights sessions		
	Improve efficiency by incorporating high cadence zone 3 work at the end of long aerobic rides.		
	Day	Total days on bike time	General description of day's training
Block 1 Week 1	Mon	00:20:00	Easy aerobic zone 1-2 ride, this can be done before breakfast to switch the body to becoming better at fat burning, essential for such a long event
	Tue	00:20:00	Easy aerobic ride at zone 1-2, this can be done before breakfast to start the switch to becoming a better fat burning rider essential for such a long event. As well as the on bike training start the basic core strength work to ensure good stability. Most of this core stability work can be done at home so you don't need to find time to fit in a gym visit
	Wed	01:00:00	After a good warm up of 15-20 minutes zone 1-2 spinning incorporate 5 x 1 minute 70 rpm steep hill reps, as these are very high intensity don't worry about the zone just aim to use a gear that you can just push 70rpm for 1 minute, then turn round and recover for 4 minutes between reps. The rest of the ride should be easy zone 2 high cadence 90+ rpm spinning. Always cool down for 10 minutes at zone 1 at the end of the ride and stretch each day to prevent stiffness and possible injury
	Thu	00:20:00	As on Monday
	Fri	00:20:00	As on Tuesday
	Sat	02:30:00	Big day today, the start of the ride should be the same as Wednesdays ride with 5 steep hill reps. Towards the end of the ride add 3 x 8 minute zone 3 high cadence reps (90+ ideally 100 rpm) on a moderate hill with 8 minutes recovery between reps. Make sure you eat 60-80grams of carbs per hour along with plenty of fluid for this ride or the quality of the 10 minute reps at the end of the ride will suffer.
	Sun	02:00:00	Easy aerobic ride, today is the same as the second half of yesterdays ride, easy zone 2 spinning for the most of the ride then towards the end of the session add 3 x 8 minute zone 3 high cadence reps (90+ ideally 100 rpm) on a moderate hill with 8 minutes recovery between reps
		Total weekly hours	06:50:00

Objectives	Try to increase flexibility and aim to increase the number of core exercises by 2-5 reps for each exercise		
	Add 1 extra strength rep during Wednesday and Saturdays session		
	Add 2 minutes to the zone 3 high cadence zone 3 reps making them 10 minutes long		
	Day	Total days on bike time	General description of day's training
Block 1 week 2	Mon	00:30:00	Easy aerobic zone 1-2 ride, this can be done before breakfast to switch the body to becoming better at fat burning, essential for such a long event
	Tue	00:30:00	As last Tuesday
	Wed	01:20:00	As last Wednesday add 1 extra force rep
	Thu	00:30:00	As on Monday
	Fri	00:30:00	As on Tuesday
	Sat	03:00:00	As last Saturday with 6 force reps and 3 x 10 minute zone 3 efforts
	Sun	02:30:00	As last Sunday with 3 x 10 minute zone 3 efforts
	Total weekly hours	08:50:00	

Objectives	Recover from 2 weeks of hard strength and endurance training		
	Reduce the number of strength exercises and reduce the volume		
	Try to fit in one extra core and gym session this week		
	Day	Total days on bike time	General description of day's training
Block 1 week 3	Mon	00:30:00	Easy aerobic zone 1-2 ride, this can be done before breakfast to switch the body to becoming better at fat burning, essential for such a long event
	Tue	00:30:00	Easy aerobic ride at zone 1-2, this can be done before breakfast to start the switch to becoming a better fat burning rider essential for such a long event. As well as the on bike training start the basic core strength work to ensure good stability. Most of this core stability work can be done at home so you don't need to find time to fit in a gym visit
	Wed	01:00:00	After a good warm up of 15-20 minutes zone 1-2 spinning incorporate 3 x 1 minute 70 rpm steep hill reps, as these are very high intensity don't worry about the zone just aim to use a gear that you can just push 70rpm for 1 minute, then turn round and recover for 4 minutes between reps. The rest of the ride should be easy zone 2 high cadence 90+ rpm spinning. Always cool down for 10 minutes at zone 1 at the end of the ride and stretch each day to prevent stiffness and possible injury
	Thu	00:30:00	As on Monday
	Fri	00:30:00	As on Tuesday
	Sat	03:00:00	Easy zone 2 spinning for the most of the ride then towards the end of the session add 3 x 10 minute zone 3 high cadence reps (90+ ideally 100 rpm) on a moderate hill with 10 minutes recovery between reps
	Sun	0:30:00	As on Tuesday
	Total weekly hours	06:30:00	

Objectives	Increase intensity of strength reps reducing the rpm to 50 and using a bigger gear		
	Increase Zone 3 high cadence intervals to 12 minutes		
	Gradual increase in volume		
	Day	Total days on bike time	General description of day's training
Block 2 week 1	Mon	00:30:00	Easy aerobic zone 1-2 ride, this can be done before breakfast to switch the body to becoming better at fat burning, essential for such a long event
	Tue	00:30:00	Easy aerobic ride at zone 1-2, this can be done before breakfast to start the switch to becoming a better fat burning rider essential for such a long event. As well as the on bike training start the basic core strength work to ensure good stability. Most of this core stability work can be done at home so you don't need to find time to fit in a gym visit
	Wed	01:30:00	After a good warm up of 15-20 minutes zone 1-2 spinning incorporate 6 x 1 minute 50 rpm steep hill reps, as these are very high intensity don't worry about the zone just aim to use a gear that you can just push 50rpm for 1 minute, then turn round and recover for 4 minutes between reps. The rest of the ride should be easy zone 2 high cadence 90+ rpm spinning. Always cool down for 10 minutes at zone 1 at the end of the ride and stretch each day to prevent stiffness and possible injury
	Thu	00:30:00	As on Monday
	Fri	00:30:00	As on Tuesday
	Sat	03:30:00	Big day today, the start of the ride should be the same as Wednesdays ride with 6 x 1 minute 50 rpm steep hill reps. Towards the end of the ride add 3 x 12 minute zone 3 high cadence reps (90+ ideally 100 rpm) on a moderate hill with 10 minutes recovery between reps. Make sure you eat 60-80grams of carbs per hour along with plenty of fluid for this ride or the quality of the 10 minute reps at the end of the ride will suffer.
	Sun	03:00:00	Easy aerobic ride, today is the same as the second half of yesterdays ride, easy zone 2 spinning for the most of the ride then towards the end of the session add 3 x 12 minute zone 3 high cadence reps (90+ ideally 100 rpm) on a moderate hill with 10 minutes recovery between reps
	Total weekly hours	09:00:00	

Objectives	Using the same gear as last week aim ride up the same hill for longer than you did last week. During the 50 rpm hill reps. Aim for 1 min 20 seconds		
	Change one of the high cadence zone 3 efforts to a 70 rpm zone 3 efforts		
	Ensure good recovery on your easy days, don't spend the recovery day on your feet as the training gets tough		
	Day	Total days on bike time	General description of day's training
Block 2 week 2	Mon	00:30:00	Easy aerobic zone 1-2 ride, this can be done before breakfast to switch the body to becoming better at fat burning, essential for such a long event
	Tue	00:30:00	Easy aerobic ride at zone 1-2, this can be done before breakfast to start the switch to becoming a better fat burning rider essential for such a long event. As well as the on bike training start the basic core strength work to ensure good stability. Most of this core stability work can be done at home so you don't need to find time to fit in a gym visit
	Wed	01:30:00	As last Wednesday drag out the 50 rpm hill rep to 1 minute 20 seconds if you can
	Thu	00:30:00	As on Monday
	Fri	00:30:00	As on Tuesday
	Sat	04:00:00	As last Saturday, drag out the 50 rpm hill rep to 1 minute 20 seconds if you can and today swap one of the 12 minute high cadence zone 3 intervals for a 70 rpm zone 3 rep.
	Sun	03:00:00	Same as last week but again swap one of the zone 3, 12 minute high cadence intervals for a 70 rpm zone 3 rep.
	Total weekly hours	08:50:00	

Objectives	Recover from 2 weeks of hard strength and endurance training		
	Reduce the number of strength exercises and reduce the volume to		
	Try to fit in one extra core and gym session this week		
	Day	Total days on bike time	General description of day's training
Block 2 week 3	Mon	00:30:00	Easy aerobic zone 1-2 ride, this can be done before breakfast to switch the body to becoming better at fat burning, essential for such a long event
	Tue	00:30:00	Easy aerobic ride at zone 1-2, this can be done before breakfast to start the switch to becoming a better fat burning rider essential for such a long event. As well as the on bike training start the basic core strength work to ensure good stability. Most of this core stability work can be done at home so you don't need to find time to fit in a gym visit
	Wed	01:00:00	After a good warm up of 15-20 minutes zone 1-2 spinning incorporate 3 x 1 minute 70 rpm steep hill reps, as these are very high intensity don't worry about the zone just aim to use a gear that you can just push 70rpm for 1 minute, then turn round and recover for 4 minutes between reps. The rest of the ride should be easy zone 2 high cadence 90+ rpm spinning. Always cool down for 10 minutes at zone 1 at the end of the ride and stretch each day to prevent stiffness and possible injury
	Thu	00:30:00	As on Monday
	Fri	00:30:00	As on Tuesday
	Sat	02:30:00	Easy zone 2 spinning for the most of the ride then towards the end of the session add 3 x 10 minute zone 3 high cadence reps (90+ ideally 100 rpm) on a moderate hill with 10 minutes recovery between reps
	Sun	00:30:00	As on Tuesday
	Total weekly hours	06:30:00	

Objectives	Switch strength to maintenance		
	Maintain aerobic high cadence zone 3 intervals and increase volume of Saturdays ride		
	Add high aerobic zone 4 efforts		
	Day	Total days on bike time	General description of day's training
Block 3 week 1	Mon	00:30:00	Easy aerobic zone 1-2 ride, this can be done before breakfast to switch the body to becoming better at fat burning, essential for such a long event
	Tue	00:30:00	Easy aerobic ride at zone 1-2, this can be done before breakfast to start the switch to becoming a better fat burning rider essential for such a long event. As well as the on bike training start the basic core strength work to ensure good stability. Most of this core stability work can be done at home so you don't need to find time to fit in a gym visit
	Wed	02:00:00	As Wednesday of Block 2 week 2, drag out the 50 rpm hill reps to 2 minutes if you can, but just do 2-3 reps with 4 minutes recovery and spin the over geared work out of your legs at zone 2 for the middle part of the ride finishing with one 12 minute zone 3 high cadence effort.
	Thu	00:30:00	As on Monday
	Fri	00:30:00	As on Tuesday
	Sat	04:00:00	After a full warm up Just do 3 strength reps today at 50 rpm lasting 1.5 minutes with 4 minutes recovery between reps, the middle portion of the ride should be easy zone 1-2 spinning at 80-100 rpm, towards the end of the ride incorporate 1 x 12 minute zone 4 high cadence effort and 2 x 12 minute zone 3 high cadence efforts. All with 10 minutes recovery at zone 1-2 between reps
	Sun	03:00:00	Same as Block 2 Week 2
	Total weekly hours	11:00:00	

Objectives	Maintain strength		
	Add a 12 minute zone 4 effort to the Wednesday mid week ride		
	Add a second high aerobic zone 4 effort to Saturdays ride		
	Day	Total days on bike time	General description of day's training
Block 3 week 2	Mon	00:30:00	Easy aerobic zone 1-2 ride, this can be done before breakfast to switch the body to becoming better at fat burning, essential for such a long event
	Tue	00:30:00	Easy aerobic ride, this can be done before breakfast to start the switch to becoming a better fat burning rider essential for such a long event. As well as the on bike training start the basic core strength work to ensure good stability. Most of this core stability work can be done at home so you don't need to find time to fit in a gym visit
	Wed	01:45:00	As last Wednesday but increase the intensity of the 12 minute effort to zone 4. remember to cool down after the session.
	Thu	00:30:00	As on Monday
	Fri	00:30:00	As on Tuesday
	Sat	04:30:00	As last week but you are going to do 2 x 12 minute zone 4 high cadence reps today and just 1 at zone 3, work hard and aim to cover more distance in 12 minutes than have done before up your training hill.
	Sun	03:00:00	Same as last week
		Total weekly hours	08:50:00

Objectives	Recover from 2 weeks of hard strength and endurance training		
	Reduce the number of strength exercises and reduce the volume to		
	Try to fit in one extra core and gym session this week		
	Day	Total days on bike time	General description of day's training
Block 3 week 3	Mon	00:30:00	Easy aerobic zone 1-2 ride, this can be done before breakfast to switch the body to becoming better at fat burning, essential for such a long event t
	Tue	00:30:00	Easy aerobic ride, this can be done before breakfast to start the switch to becoming a better fat burning rider essential for such a long event. As well as the on bike training start the basic core strength work to ensure good stability. Most of this core stability work can be done at home so you don't need to find time to fit in a gym visit
	Wed	01:00:00	After a good warm up of 15-20 minutes zone 1-2 spinning incorporate 3 x 1 minute 70 rpm steep hill reps, as these are very high intensity don't worry about the zone just aim to use a gear that you can just push 70rpm for 1 minute, then turn round and recover for 4 minutes between reps. The rest of the ride should be easy zone 2 high cadence 90+ rpm spinning. Always cool down for 10 minutes at zone 1 at the end of the ride and stretch each day to prevent stiffness and possible injury
	Thu	00:30:00	As on Monday
	Fri	00:30:00	As on Tuesday
	Sat	02:30:00	Easy zone 2 spinning for the most of the ride then towards the end of the session add 3 x 10 minute zone 3 high cadence reps (90+ ideally 100 rpm) on a moderate hill with 10 minutes recovery between reps
	Sun	00:30:00	As on Monday
	Total weekly hours	06:00:00	

Objectives	Repeat Block 3 week 2, but Sunday is a much lower volume day with less intensity		
	Aim to travel further in 12 minutes than you have done before during your aerobic intervals		
	Try to push the same gear for longer during the over geared intervals		
	Day	Total days on bike time	General description of day's training
Block 4 week 1 Final overload	Mon	00:30:00	As block 3 week 2
	Tue	00:30:00	As block 3 week 2
	Wed	01:45:00	As block 3 week 2
	Thu	00:30:00	As block 3 week 2
	Fri	00:30:00	As block 3 week 2
	Sat	04:30:00	As block 3 week 2
	Sun	02:30:00	As block 1 week 2
	Total weekly hours	10:15:00	

Objectives	Eat 35 % extra calories from carbohydrate with each meal from Friday morning after the training		
	Cut out all strength training this week		
	Ensure good nutrition during the event don't waste all the good training by not eating and drinking correctly especially during the first part of the event.		
	Day	Total days on bike time	General description of day's training
Block 3 week 3	Mon	00:30:00	Easy aerobic ride, this can be done before breakfast to start the switch to becoming a better fat burning rider essential for such a long event
	Tue	00:30:00	Easy aerobic ride, this can be done before breakfast to start the switch to becoming a better fat burning rider essential for such a long event. As well as the on bike training start the basic core strength work to ensure good stability. Most of this core stability work can be done at home so you don't need to find time to fit in a gym visit
	Wed	01:00:00	After a good warm up of 15-20 minutes zone 1-2 spinning incorporate 3 x 1 minute 70 rpm steep hill reps, as these are very high intensity don't worry about the zone just aim to use a gear that you can just push 70rpm for 1 minute, then turn round and recover for 4 minutes between reps. The rest of the ride should be easy zone 2 high cadence 90+ rpm spinning. Always cool down for 10 minutes at zone 1 at the end of the ride and stretch each day to prevent stiffness and possible injury
	Thu	00:30:00	As on Monday
	Fri	00:30:00	Tune up ride, easy 30-40 minutes incorporating 3 x 5 minute zone 3 efforts with 5 minutes recovery between reps. Try to get this done in the morning rather than the afternoon so you have plenty of time to fill your legs with carbohydrate
	Sat	?	Taranaki Challenge
	Sun	01:00:00	1 hour easy zone 1 recovery ride.
		Total weekly hours	04:00:00

The early morning pre breakfast rides are done in a fasted state so your body will switch to burning fat and raise your metabolism for the day so you can also burn a few more calories during the day, helping to drop some unwanted fat. There is plenty of progressive strength and if you feel you can add more volume to the Wednesday, Saturday and Sunday rides you can as long as it's easy zone 1-2 work.

The only part I have not explained is the core stability training that can be done on any of the easy low volume days. Some simple core stability exercises are listed below, links of examples can be found on the internet or ask your local gym instructor for a demonstration.

			Main session	Training goal week 1		
Warm up	Sets	Reps	Exercise	sets	reps	Rest
Lateral squat	3	10	Body Row	2	6	2 min
Spider man Lunge	3	10	Shoulder press	2	10	2 min
Burpees	3	10	Press up with twist	2	6	2 min
			Back Extension	3	10	2 min
			Crunch	3	15	1 min
			Oblique Crunch	2	15	1 min
			Cook Hip Lift	3	10 Each leg	1 min

Myself and Jenn O'Connor will be returning to New Plymouth in early December to set up a sport exercise and coaching science consultancy, where we will be able to conduct health and exercise appraisals, performance testing, biomechanical analysis and coaching. We will also be looking to take on board some young endurance cyclists to mentor up to a high national and even World class level, so I look forward to meeting and working with new people and the challenges ahead.

Good luck with your training, see you on the road.

Andrew Patterson

Patterson Training Sport Science Support