

Tom Newman

Intensive 12 Week Training Programmes

Introduction

This article outlines part of the process I undertook to complete my BC Level 3 Road and Time Trial Qualification. A major part of this course is to complete an intensive coaching programme with a cyclist who will be prepared to fill in weekly diaries and exchange information on a regular basis. The aim is to show that the coach can improve some aspect(s) of the rider's performance over a 12 week period. This isn't confined to prescribing training programmes but can include motivation, skills and tactics in racing for example. I will outline the 12 week process for each rider to show how the coaching evolved and developed to include performance analysis for aerodynamic improvements and reducing training when staleness and accidents set in for example.

Background to the Programme

The first job is to profile the riders by gathering lots of information with questionnaires, interviews and observation.. The coach then has to undertake research to establish the performance benchmarks for each criteria of the profiled rider's improvement e.g. sprint performance or power to weight ratio. They have to establish short, medium and long-term goals based on the rider profile and identified performance benchmarks. An annual plan then has to be devised for each profiled rider and the prescribed training has to be evaluated and controlled over a 12 week period.

I was fortunate in being able to identify two members from my club, the Westerley Cycling Club, who were willing to be coached. However the course only requires one rider but I decided to have one as a fall back in case one dropped out. This article will focus on the main case of Malcolm and then provide a briefer account of Frank.

Case 1 (Malcolm)

Rider Summary

Age	30
Height	180cm (5' 11')
Weight	76kg (11 stone 6 pounds)
RHR	50
MHR	192
Power to weight	4.7

Malcolm was an interesting case as the previous year (2008) he experienced open heart surgery, so 2009 was going to be his comeback year so to speak. With Malcolm, one matter I wanted to be clear about was that he had been given the all clear from his doctor to train and race. This was confirmed, so on with the training. Malcolm was

busy running his Bike shop and taking over from his father and had about 6 hours a week to devote to training.

Goals

Malcolm is a time trialler who wanted to get back to his form of previous years. This was regularly under the hour and claiming the Westerley's short distance TT championship, based on 10, 25 and 50 mile time trials. Goals were: 10 miles – 22 minutes, 25 miles – 55 minutes & 50 miles – 1.58.00

Both of my cases lived in London, surrounded by busy streets, not ideal for training and could only get out to quieter lanes at the weekend. Fortunately, both guys were assiduous turbo trainers. From where Malcolm and Frank lived there is a minimum of 45 to 60 minutes to relatively quiet roads to train on. Also, frequent stop/ starts with traffic lights, road junctions etc. As both guys did not have this available time especially during the week, turbo training was really the only practicable solution for high intensity sessions. With just 6 hours to play with quality rather than quantity was the name of the game especially as long races were excluded and in Malcolm's case who wanted to win the Westerley's short distance championship only two 50 mile time trials were involved so it was worth a gamble on not prescribing longer training rides.

CASE 1

Malcolm's training plan focused on developing his aerobic endurance and short term muscular endurance. The training program I prescribed was loosely based on the excellent ABCC article and concentrated on speed. Towards the back end of the 2008 season, on limited training Malcolm had already scraped under the hour. Plus since the beginning of 2009 he had steadily been getting in good endurance training riding on Wednesday's and Sunday's.

Malcolm's training program:

Week	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
1	Z1 commute 40mins	Turbo Warm up, then 2 sets of 3x30sec hard efforts Z6 high leg speed, 30secs recovery between efforts, 5mins between sets, 10min cool down	11/2 hours steady around Hillingdon circuit, ride last 5 laps at TT pace.	Z1 commute 40mins	Race, Good Friday 24.01	Rest	Club run 3 hours Z2/ Z3
2	Rest day	Turbo, split 3min. Warm up, 4 x 3mins Z5/Z6 intervals 3mins rest between. 10min cool down	Evening 10, practise warm up routine. Time 24.45	Turbo, warm up long sprint 30sec Z6, 4mins recovery, total 6 efforts, 10min cool down.	Rest	Rest	25mile TT. 1hour 1min riding 86'' fixed.
3	Rest day	Turbo, split	2 hours road	Turbo, warm	Rest	Weekend	Weekend

		3min. Warm up 5 x 3min Z5/Z6 interval 3min recovery 10min cool down	ride, Include after a while, and near the end, 2 x 15sec flat out sprints.	up long sprint 30secs Z6, 4mins recovery, total 8 efforts, 10min cool down.		away	away.
4	Suffering from a cold, no training	Nothing, still suffering from a cold	Evening 10. rode a 25.37	Rest	Turbo warm up then unstructured session	Rest	25mile TT. 59.36 first time under this season
5	10mile TT 24.15 found this difficult	Easy commute ride	2 hour Z2 road ride	Rest	Turbo warm up long sprint 30secs Z6 4mins recovery, total 10 efforts 10mn cool down	Rest	25mile hilly TT, 1 hour 1min, rode out and back.
6	Easy commute	Turbo, warm up, then 1 hour Z3 with 6x15sec max sprints distributed, 10min cool down.	2 x 10 mile Time trials, rode 23 min both times in afternoon and evening.	Rest	Turbo, warm up 1min Z6 with 1min recovery total 3 sessions.	Rest	25mile TT rode 59.35
7	Easy commute	Turbo, split 3min warm up then 5x3min Z5/Z6 3mins recovery 10min cool down.	2 hour road ride Z3	Rest	Missed prescribed session	Rest	Tandem 25
8	Rest day	Turbo, warm up 6x3min Z5/Z6 intervals 3min recovery, 10min cool down.	10mile TT recorded 24.25 fastest on Hillingdon circuit course.	Easy commute	Turbo, warm up then 1 hour Z3 with 6x15sec max sprints evenly distributed	Easy commute	25 mile TT, highlighted event, rode 56.48 top 10 place and beat rivals.

9	Easy commute	Turbo, warm up then 6x3min Z5/Z6 intervals 3min recover 10min cool down.	10 mile TT recorded 23.00 on hard course rode out and back.	Rest	Turbo, warm up, then long sprint session 30secs Z6 4min recovery 8 efforts total 10min cool down	Rest	25mile TT but event cancelled due to accident, but averaged over 26mph.
10	Easy commute	Turbo, warm up split 3min 4x3mins Z5/Z6 with 3min recovery 10min cool down.	10 mile TT rode it as 3man Team Time Trial for practise.	Rest	Turbo, warm up long sprint 30secs Z6 with 4mins recovery total 6 efforts, 10min cool down.	Rest	25mile TT rode 89" fixed compared to normal 86" achieved 59.02
11	Easy commute	Turbo, warm up split 3min 5x3mins Z5/Z6 with 3min recovery, 10min cool down.	3.5 hour Z2/ Z3 road ride	Rest	Turbo, warm up long sprint 30secs Z6 4mins recovery total 7 efforts, 10min cool down.	Rest	Day off
12	Easy commute	Turbo, warm up split 3min 6x3mins Z5/Z6 with 3min recovery 10min cool down.	10 mile TT rode it as 3man team time trial.	Rest	Turbo, warm up short sprint, 10secs hard effort Z6 2min recovery total 8 efforts 10min cool down	Rest	10 mile TT, 22min fastest 10 since 2006. Rode on fixed 89" average RPM 101. Great result.

The logic behind the 12 week plan: The prescribed training had to be progressive, challenging and take into account Malcolm's sometimes hectic lifestyle, he regularly did not finish work until nearly 7pm and was on his feet the best part of this. I did not want to exhaust him. Fortunately he was a good turbo trainer and I knew him well as I coached him prior to his operation. Turbo training was initially prescribed on Tuesday and Thursday with the hardest session on the former day. The intervals were based on the ABCC method comprising of various interval sessions as outlined in the previous plan. Without going into too much detail the longer session early in the week and the less arduous session later in the week. With Wednesday's off work Malcolm rode his endurance session. Most Sunday's were set aside for racing.

Living close to central London this presented a challenge in finding quite roads to ride on. We came up with a couple of solutions; one was riding at Hillingdon circuit in the morning, boring but safe. We alternated this every other Wednesday as the Westerley's evening 10 mile time trials were held on this circuit so we didn't want too much of a good thing. The other Wednesday ride used a fairly quite circuit at Harefield which I personally used myself over the years. I carried out for myself a risk assessment of the circuit and passed my comments to Malcolm. From his home, Malcolm took about an hour to ride out, each circuit took about 10 minutes to ride so the total duration of the ride could be planned which suited him as he wanted to plan

his day accurately. Concentrating on Hillingdon lap times of the circuit were recorded so we had another tool to measure his progress. I knew that a lap time of 2mins and 8secs would result in a 23min 30sec for a 10 mile TT. So 1 second slower lap time would add 10 seconds to this time and conversely 1 second quicker lap time would reduce the time by 10 seconds. Of course this assumes the rider can keep riding at this intensity.

As touched on earlier, my club: Westerley CC ran 10 mile time trials at Hillingdon every other Wednesday throughout the racing season. The benchmark for Malcolm was 23 minute 10's. This time would convert to a 22 or 21 minute 10 on much faster courses on an average day. Over the years I built up a database of lap times and also monitored riders negotiating the tricky bend on tri bars and selecting the shortest riding line around the circuit. With this circuit I had a wonderfully simple tool in being able to test riders, the only variable being the weather, but fortunately throughout the 2009 season we only had one wet night. And the wind was for most of the time only blowing in one direction, all these variables were noted. Having raced, marshalled, carried out lap times for many years and kept a personal database I had a vast collection of information. One of my closet cycling mates who was an excellent time trialler, regularly under the hour and less than 4 hours for 100's rode Hillingdon for several seasons. His, plus other riders opinions endorsed my view that a 23 minute 10 was really good ride on this circuit and could easily transfer to a 22 or 21 minute 10 on a reasonable course on average day as mentioned earlier.

Using this information and discussing with Malcolm, we agreed this was the benchmark that we wanted to achieve by the middle of the season. Starting off with encouraging 24 minute 10's the 23 minute target was achieved by mid-June. My man was on top form.

Not only did I test Malcolm's physical attributes but questioned his mindset, was he up for it? Over the weeks with training he began to concentrate better before races and truly focused on the task in hand. Thursday's turbo sessions were moved to Friday. As Malcolm could not race on Saturday's as he worked this did not cause a problem. His warm up routine was honed and developed and used before every event. Also, we worked on his mental powers so that he simply focused on going fast.

I was fortunate that Malcolm was a keen 'Fixed' user and had a very nice carbon machine. Being an enthusiastic fixed user myself and advocate of this transmission type we certainly bonded on this subject. Most of the time he used fixed at Hillingdon, occasionally using gears and some of his best times on the road he also used fixed, so his pedalling envelope was expanded and felt confident using gears or fixed. I'd like to think that my enthusiasm for this form of transmission conveyed itself into his mindset and that discussions on gearing used endorsed his confidence he had in me, most of the time he used a gear of 89".



Getting the most aerodynamic position and being comfortable and being able to put the power down was relatively easy surprisingly. As both Malcolm and I agreed on this subject and moved the aero bars, adjusted both the fork spacers and saddle. I took pictures with my SLR digital camera and showed them to him and his time trial position was fixed. To give an idea on how flexible Malcolm was, I rode his bike once as we are of similar height and build. But I could only ride in this position for very short durations as I found it so uncomfortable and was amazed he found the opposite. The joy of youth.

Work, illness and other commitments had to be negotiated, and while the Tuesday turbo session was more or less settled we moved the Thursday session to Friday, giving a day of recovery from Wednesday's efforts. Also after work on Saturday we slotted in a gentle 20 minute turbo session to ease the legs ready for Sunday's race. This was Malcolm's idea and seemed to work very well. By the end of May Malcolm was going well and we introduced a taper week in before one of his big goals the Westerley Open 25. Although he was slightly nervous about tapering down before a big event, it certainly worked well as he rode to a fast 56 and finished in the top 10, so confidence now was soaring.

Staleness crept into July and results were not improving, so we cut back and agreed that every fourth week we would build in a very easy week and reduce the intervals towards to latter half of the week on the other sessions. Malcolm's condition improved both physically and mentally resulting in a personal best of 55 minutes for a 25 and also getting under 2 hours for a 50. He clinched the Westerley short distance time trial championship as well.

Case 2 (Frank)

Frank, was a self employed removal man, with a young family and could only get base miles in to and fro from work, about 6 miles each way. Unlike most cyclists Frank was very stocky and muscular and could generate enormous amount of power

on turbo's as witnessed at Westerley winter series events. I earmarked him as roadman sprinter.

With Frank, I did not have to provide weekly training plans but I did it in a spread sheet format on a monthly basis. With constant dialogue we altered the plans to suit his unique individual needs as he travelled a great deal with his job. The coaching closely replicated the demands of road racing with lots of high powered sprints, building in adequate recovery and one endurance ride early on Saturday morning which could be switched to Sunday if necessary. A typical monthly training program for Frank as follows:

	Mon	Weds	Fri		Sat	Sun
Week 1	90min 10min Z1 then Z2 but include 2x15min Z4 5min Z1 between	90min 10min Z1 Remainder Z2 but include 2x10sec sprints Z4 near the end 5min between	90min 15min Z1 then 7, 5 & 3min Z4 efforts 1min Z1 between		90min Z1(include 3 blocks of 5min alternating 30sec Z4/ 30sec Z1 between each block	Sat or Sun for Sat session
Week 2	90min (10 min Z1 then Z2 but include 20min Z4 & 10min Z4 with 5min Z1 between	As week 1 but include 4 x 10sec sprints Z4 near the end 5min between	90min (15min Z1 then Z2 but include 2x10min Z4 with 5min Z1 between		90min Z1 but include 3 blocks of 5min with 30sec Z4/30sec Z1 5min between	
Week 3	90min (10min Z1 then Z2 but include 30min Z4 in last hour	As week 1 but include 6 x 10sec sprints Z4 near the end 5min between	90min (15min Z1 then 9, 7, 5 & 3min Z4 with 1min easy between		90min Z1 but include 3 blocks of 5min with 30sec Z4/30 sec Z1 5min between	.
Week 4	90 min Z1	Rest just commute to work	FTP test, warm up 10min Z1, then 10min Z2, 2 x sprint, 2min Z1 then ride for 30min as hard as you can record average HR		90min Z1 enjoy the ride, listen to music	
			Z1= 115-125 Z2=125-144 Z3=144-157 Z4=157-170 Z5=157-180 Z6=180			

Starting off well, Frank gained 9 points on his license at the regular Hillingdon Tuesday night league. But a bad crash one evening knocked the stuffing out of him and he was never quite the same losing enthusiasm and motivation.

Summary

Concentrating on Frank firstly, I believe the accident he suffered could have been attributed to poor equipment and his bicycle not being serviced properly.. If I had any doubts I should have recommended him to get the bike properly serviced at a good bike shop. .

On reflection it would have been a question I should have brought up in the interview.

With Malcolm there were no problems with his equipment, all expertly serviced. I believe his racing program was too heavy and more available Sunday's should have been slotted in, thus making him fresher. Also, the intervals were simply too arduous and I should have spotted this earlier, discussed it with him and altered accordingly. I also found out about his racing program too late in the day so the targeted events weren't given enough status. By the end of the season I'd ironed this problem out but I should have been more severe with him. I overcame this with more face to face meetings where I found that it was more difficult for the rider to be evasive. With this in mind I found that I was weak in prescribing correct tapering for key events. . Although I was satisfied with Malcolm's answer about his heart condition I should have insisted in receiving a doctor's note confirming the all clear.

As a general observation, I should have been more aware of technical, tactical and psychological goals, instead of concentrating more on physiological goals. For example: advising the rider to focus on an aspect of the race such as position in a circuit race or cadence for the first 10 minutes in a time trial.

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