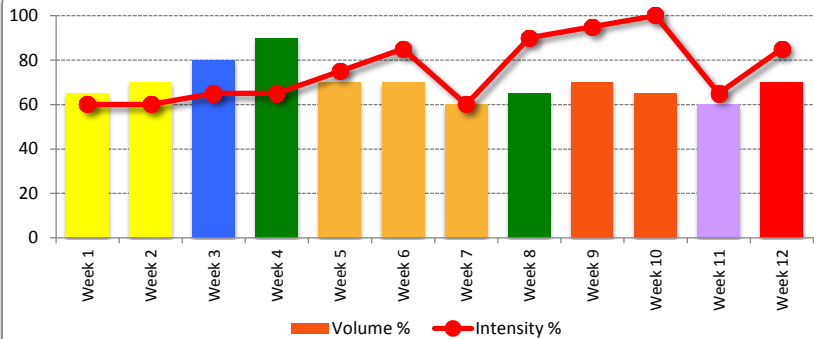


12-Week Stage Race Training Plan (NOVICE)

You've signed up for a stage race, now what? Top South African endurance coaches from Science 2 Sport have provided this 12-Week Stage Race Training Plan. This periodisation programme includes strength development on the bike, aerobic conditioning, threshold conditioning and peak power improvements and is aimed for someone doing a stage race three days or longer. This programme is designed to cater to the needs of the working rider whether it be male or female, with prior riding experience and requires on average, 10-12 hours a week. If you are interested in paying for a more advanced programme by Science 2 Sport, go to their website www.sciencetosport.com



To determine your training zones accurately, we recommend you visit your nearest performance testing centre, such as the Discovery High Performance Cycling Centre located at the Sports Science Institute of South Africa. Alternatively, you may use the Karvonen formula, shown below, to calculate your training zones.

RHR = Resting Heart Rate (For example 50 beats per minute (bpm))

MHR = Maximal Heart Rate . If you are unsure of your maximal heart rate, use the highest heart rate you have recorded during training. (For example 200 bpm)

HRR = Heart Rate Reserve = $MHR - RHR$ (200 - 50 = 150 bpm)

Target heart rate = $(\text{Intensity (\% of HRR)} + RHR)$

- Zone 1
- Zone 2
- Zone 3
- Zone 4
- Zone 5

- 20 - 40 %
- 40 - 60 %
- 60 - 80 %
- 80 - 90 %
- > 90%

Target Heart Rates

- 80 -110 bpm
- 110 - 140 bpm
- 140 - 170 bpm
- 170 - 185 bpm
- >185 bpm



DAY	TRAINING
Monday	Rest no exercise
Tuesday	1.5 Hours Recovery in zone 2, Keep cadence > 90
Wednesday	Warm up 30 min zone 2 and 3: Follow with 8 x 3 minutes of one legged riding. Keep non working leg clipped in. Do 5 minutes of riding with both legs between each one leg repeat. Warm down 30 minutes - zone 2
Thursday	1.5 Hours Zone 2 / low zone 3 only. Cadence > 90 throughout. During second hour of ride do 4 x 30 second maximal effort sprints on FLAT terrain. Do not shift down the block but allow cadence to reach absolute maximum and then try to hold that cadence for full 30 seconds. These are not intervals and should not hurt you, they are only maintaining the neuromuscular mechanisms and leg speed for later in the season.
Friday	Rest no exercise
Saturday	Warm up 30 min zone 2 and 3: Follow with 8 x 3 minutes of one legged riding. Keep non working leg clipped in. Do 5 minutes of riding with both legs between each one leg repeat. Warm down 30 minutes - zone 2
Sunday	Do not eat breakfast. Drink 2 x Espresso Caps and a strong cup of coffee with 2 sugars only. Ride 120 minutes zone 2 only. Drink plenty of water while riding. After 120 minutes drink 250mls of energy drink. Continue riding for another 60 minutes in zone 2. After ride, eat a small amount of pasta and mostly leafy salad and vegetables. Eat two small meals of salad, fresh fruit and vegetables in the late afternoon and for dinner.

Week 1

Coaches Weekly Tips: This is the first week of your strength mesocycle. The important Sessions of this week include the Wednesday and Saturday sessions. The sessions are designed to improve your pedalstroke.



DAY		TRAINING
Week 2	Monday	Rest no exercise
	Tuesday	Warm up for 30 min in zone 2 and 3: Follow this with 5 x 5 minutes in a high gear and at a low cadence (Use a gear which you can only just turn over. Keep your cadence at 30-40 during the high gear efforts and at 90 during the rest periods. Rest 5 min in zone 2 between each high gear effort. Warm down 30 min - zone 2. (The high gear efforts are not a maximum intensity effort. Your heart rate should rise steadily through each 4 minutes and reach the top of zone 3 at the end but NOT zone 4).
	Wednesday	1.5 Hours Recovery in zone 2, Keep cadence > 90
	Thursday	Warm up 30 min zone 2 and 3: Follow with 3 x 10 minutes of seated climbing on moderate gradient. Keep cadence low (50-65) and gearing low (39 x 23). Keep intensity below zone 4. If necessary use a lower gear but keep cadence low. Recovery of 10 minutes - zone 2 between climbs. Keep shoulders and hands relaxed during climbs. Stand for 50 metres if you cannot sustain seated position. Warm down 30 min zone 2.
	Friday	Rest no exercise
	Saturday	Warm up for 30 min in zone 2 and 3: Follow this with 8 x 4 minutes in a high gear and at a low cadence (Use a gear which you can only just turn over. Keep your cadence at 40-50 during the high gear efforts and at 90 during the rest periods. Rest 10 min in zone 2 between each high gear effort. Warm down 30 min - zone 2. (The high gear efforts are not a maximum intensity effort. Your heart rate should rise steadily through each 4 minutes and reach the top of zone 3 at the end but NOT zone 4).
	Sunday	4 Hours Zone 2 / low zone 3 only. Cadence > 90 throughout. During second hour of ride do 4 x 30 second maximal effort sprints on FLAT terrain. Do not shift down the block but allow cadence to reach absolute maximum and then try to hold that cadence for full 30 seconds. These are not intervals and should not hurt you, they are only maintaining the neuromuscular mechanisms and leg speed for later in the season.
Coaches Weekly Tips: Your 2nd week of your strength mesocycle. The important part of this week is to improve your pedal force on the bike. Keep your hips and shoulders still while doing the torque sessions and control your breathing.		



DAY		TRAINING
Week 3	Monday	Rest no exercise
	Tuesday	1.5 Hours Zone 2 and 3 only Cadence 90-115
	Wednesday	IMTG ride- 120min LSD - zone 2 ONLY - Fasted state: Do not eat breakfast. Drink water only. Keep to zone 2 only!
	Thursday	Warm up 30 min zone 2 and 3: Follow with 8 x 3 minutes of one legged riding. Keep non working leg clipped in. Do 5 minutes of riding with both legs between each one leg repeat. Warm down 30 minutes - zone 2
	Friday	Rest no exercise
	Saturday	3.5 Hours LSD - zone 2 and low zone 3 - Keep cadence high (90-115)
	Sunday	4 Hours LSD - Self selected pace
<p>Coaches Weekly Tips: The importance of this week is to not go out of the required training zones in order to get the maximum benefit from the training. Enjoy the next few recovery and rest days.</p>		



DAY		TRAINING
Week 4	Monday	Rest no exercise
	Tuesday	2 Hours Zone 2 / low zone 3 only. Cadence > 90 throughout. During second hour of ride do 4 x 30 second maximal effort sprints on FLAT terrain. Do not shift down the block but allow cadence to reach absolute maximum and then try to hold that cadence for full 30 seconds. These are not intervals and should not hurt you, they are only maintaining the neuromuscular mechanisms and leg speed for later in the season.
	Wednesday	Rest no exercise
	Thursday	2 Hours Self selected pace
	Friday	Warm up 30 min zone 2 and 3: Follow with 3 x 10 minutes zone 4 (or LT P.O) with 10 minutes rest between each repeat - zone 2. Warm down 30 min zone 2.
	Saturday	4 Hours LSD - Self selected pace
	Sunday	IMTG ride- 120min LSD - zone 2 ONLY - Fasted state: Do not eat breakfast. Drink water only. Keep to zone 2 only!
<p>Coaches Weekly Tips: 1st 4 weeks complete and you will have strength in your legs and an improved pedal stroke. Remember to use this principal going into the new week where we will now perform higher cadence sessions that will beat an intermediate intensity to improve your aerobic capacity.</p>		



DAY	TRAINING
Monday	Rest no exercise
Tuesday	Warm up 30 min zone 2 and 3: Follow with 2 x 15 minutes zone 4 (or LT P.O) with 10 minutes rest between each repeat - zone 2. Warm down 30 min zone 2.
Wednesday	1.5 Hours Recovery in zone 2, Keep cadence > 90
Thursday	Tempo: Warm up 30min zone 2 and 3: Follow with 30 minutes in high zone 3 and zone 4. Warm down 30 min zone 2
Friday	Rest no exercise
Saturday	Do not eat breakfast. Drink 2 x Espresso Caps and a strong cup of coffee with 2 sugars only. Ride 120 minutes zone 2 only. Drink plenty of water while riding. After 120 minutes drink 250mls of energy drink. Continue riding for another 60 minutes in zone 2
Sunday	Warm up 30 min zone 2 and 3: Follow with 4 x 10 minutes of seated climbing on moderate gradient. Keep cadence HIGH (80-100) Zone 4 for each climb. Recovery of 10 minutes - zone 2 between climbs. Keep shoulders and hands relaxed during climbs and try to keep pelvis stable. Stand for 50 metres if you cannot sustain seated position. Recovery 30min zone 2 afterwards.
<p>Coaches Weekly Tips: This is the first week of your intermediate intensity mesocycle. The important focus on this week will be staying in the required zone while keeping your cadence correct. Control your breathing during the intensity efforts and remember to be in Zone 2 for all recovery periods.</p>	

Week 5



DAY	TRAINING
Monday	Rest no exercise
Tuesday	2 Hours Zone 2 / low zone 3 only. Cadence > 90
Wednesday	BLOWOUTS: Warm up 30 min zone 2 and 3: Follow with 2 x 10 minutes zone 4 heart rate with 15 minutes rest between each repeat. At the end of the 10 minute zone 4 interval raise heart rate by 2 beats for the next minute then raise the heart rate by another 2 beats for the next min etc. Until you blow. Recover in zone 2 for 30 min.
Thursday	1.5 Hours Recovery in zone 2, Keep cadence > 90
Friday	Rest no exercise
Saturday	4hrs, during the ride perform 1 x 15 min Zone 4, 1 x 10min Zone 4, 3 x 2 min Zone 5. High cadence 80-100rpm
Sunday	IMTG ride- 120min LSD - zone 2 ONLY - Fasted state: Do not eat breakfast. Drink water only. Keep to zone 2 only!
Coaches Weekly Tips: Make sure you eat a good breakfast before Saturday's session and take adequate nutrition and fluids with you.	

Week 6



DAY		TRAINING
Week 7	Monday	Rest no exercise
	Tuesday	1.5 Hours Recovery in zone 2, Keep cadence > 90
	Wednesday	Tempo: Warm up 30min zone 2 and 3: Follow with 60 minutes in high zone 3 and zone 4. Warm down 30 min zone 2
	Thursday	1.5 Hours Recovery in zone 2, Keep cadence > 90 During this ride perform 5 x 30 second sprints.
	Friday	Rest no exercise
	Saturday	4hrs, during the ride perform 1 x 20 min Zone 4, 2 x 10min Zone 4, 5 x 1 min Zone 5. High cadence 80-100rpm
	Sunday	IMTG ride- 120min LSD - zone 2 ONLY - Fasted state: Do not eat breakfast. Drink water only. Keep to zone 2 only!
<p>Coaches Weekly Tips: Another tough week in the bag and symptoms of fatigue will be felt, well done to this point and enjoy the rest week and allow the training adaptation up to this point to take effect.</p>		



DAY	TRAINING
Monday	Rest no exercise
Tuesday	2 Hours Zone 2 / low zone 3 only. Cadence > 90 throughout. During second hour of ride do 4 x 15 second maximal effort sprints on FLAT terrain. Do not shift down the block but allow cadence to reach absolute maximum and then try to hold that cadence for fu
Wednesday	Rest no exercise
Thursday	IMTG ride- 120min LSD - zone 2 ONLY - Fasted state: Do not eat breakfast. Drink water only. Keep to zone 2 only!
Friday	Rest no exercise
Saturday	Warm up 30 min zone 2 and 3: Followed by 6 x 2 min maximum intensity with 90 second recovery between repeats - zone 2 / warm down 30 min zone 2. If you are unable to keep PO above zone 4 for the entire 2min then stop and rest for 5min and then continue with the rest of the session.
Sunday	2 Hours LSD - zone 2 and low zone 3 - Keep cadence high (90-115)
Coaches Weekly Tips: Remember to eat and sleep well this week to allow your body to fully recover from the training load up to this point. Try to get at least 8 hours of sleep a night and hydrate correctly.	

Week 8



DAY		TRAINING
Week 9	Monday	Rest no exercise
	Tuesday	Pyramid Intervals: Warm up 30 min zone 2 and 3: Followed by Intervals of 1, 2, 3, 4, 5, 4, 3, 2, 1 minutes in duration. Rest the duration of the previous interval. Warm down 30 minutes zone 2. Power output should be 85% of PPO for each interval.
	Wednesday	IMTG ride- 90min LSD - zone 2 ONLY - Fasted state: Do not eat breakfast. Drink water only. Keep to zone 2 only!
	Thursday	Rest no exercise
	Friday	Warm up 30 min zone 2 and 3: Followed by 6 x 4 minutes zone 5 (or above 80% Peak P.O) with 2.5 minutes rest between repeats. Warm down 30 minutes zone 2.
	Saturday	4 Hours Zone 2 low Zone 3 only Cadence 90-115
	Sunday	IMTG ride- 90min LSD - zone 2 ONLY - Fasted state: Do not eat breakfast. Drink water only. Keep to zone 2 only!
	<p>Coaches Weekly Tips: This is the first week of your high Intensity mesocycle. The importance of this block is to increase your peak power and your lactate turnpoint. The sessions are tough but make sure you perform all the intervals correctly. The reward will be worth it.</p>	



DAY	TRAINING
Monday	Rest no exercise
Tuesday	Fartlek: Warm up 20min zone 2: Follow with 10min zone 4, 2 min recovery zone 2, 4 min zone 5, 10 min recovery zone 2, 10 min zone 4, 1 min maximal sprint, 5 min recovery zone 3, 10 min high zone 3, low zone 4, 30 second maximal sprint. Recovery 20 min zone 2.
Wednesday	IMTG ride- 120min LSD - zone 2 ONLY - Fasted state: Do not eat breakfast. Drink water only. Keep to zone 2 only!
Thursday	Rest no exercise
Friday	1,5 Hours Self selected pace
Saturday	4 Hours ride with all hills in zone 4 with rollovers (do last 300 metres of each climb in hardest gear you can turn over and sprint as hard as you can - zone 5). Ride zone 3 between hills.
Sunday	IMTG ride- 90min LSD - zone 2 ONLY - Fasted state: Do not eat breakfast. Drink water only. Keep to zone 2 only!
<p>Coaches Weekly Tips: This is the end of your intensity cycle and will be feeling fatigued from the last few weeks of training. The hard work has been done and now you taper and allow for the training adaptation to take effect leading to your big race.</p>	

Week 10



DAY	TRAINING
Monday	Rest no exercise
Tuesday	1.5 Hours Zone 2 / low zone 3 only. Cadence > 90 throughout. During second hour of ride do 4 x 15 second maximal effort sprints on FLAT terrain. Do not shift down the block but allow cadence to reach absolute maximum and then try to hold that cadence for
Wednesday	Warm up 30 min zone 2 and 3: Follow with 2 x 8 minutes zone 4 (or LT P.O) with 10 minutes rest between each repeat - zone 2. Warm down 30 min zone 2.
Thursday	Rest no exercise
Friday	Warm up 30 min zone 2 and 3: Followed by 7 x 30 second maximal intensity sprints with 5min recovery between - zone 2 / warm down 30 min zone 2.
Saturday	Rest no exercise
Sunday	Do not eat breakfast. Drink 2 x Espresso Caps and a strong cup of coffee with 2 sugars only. Ride 120 minutes zone 2 only. Drink plenty of water while riding. After 120 minutes drink 250mls of energy drink. Continue riding for another 60 minutes in zone 2
<p>Coaches Weekly Tips: You should be feeling a lot less fatigued at the end of this week but remember to follow the taper correctly.</p>	

Week 11



DAY	TRAINING
Monday	1,5 Hours LSD - zone 2 - Keep cadence high (90-115)
Tuesday	Rest no exercise
Wednesday	Warm up 30min Zone 2 and 3 followed by 4 x 4min Zone 4 with 8min Zone 2 rest between each repeat. Warm down 30min Zone 2.
Thursday	1.5 Hours Recovery in zone 2, Keep cadence > 90
Friday	Rest no exercise
Saturday	1.5 Hrs zone 2 and 3 with 5 x 2min acceleration to bring heart rate up to zone 4 for last 30 seconds of each acceleration (Use relatively hard gear and lowish cadence (70-80). Rest 5 min between each acceleration.

Week 12

C
dr
s
am

