

OLD MUTUAL GENERIC TRAINING TIPS

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TRAINING TIPS FOR THE OLD MUTUAL OM DIE DAM, TWO OCEANS AND SOWETO MARATHONS

The Old Mutual Virtual Coach offers training advice and programmes designed to help you achieve 'great things' with your running goals.

Old Mutual sponsors many of the country's leading events as well as the ASA Licensing and Temporary license scheme as part of their World Of Endurance project.

These events include **The Old Mutual Om Die Dam** in North West Province in March, **The Old Mutual Two Oceans Marathon** on Easter weekend in Cape Town, the **Comrades Marathon** in KZN in May and the **Old Mutual Soweto Marathon** in Gauteng in November.

Training programmes are provided for each of the available distance in each of these events and the format and principles for the training are consistent throughout.

These training programmes are designed with different target finish times to suit different ability levels yet also provide a table which shows the correct training paces and realistic goal times for the race under consideration.

In effect each runner can tailor the training to his or her specific ability and desire at the time.

In addition there are also 'generic' training schedules and schedules for other key events around the country on offer in the training centre, which means that this Do Great Things web site is a resource for every runner looking to prepare for any of the popular distances at any event in the country.

If you are not already a runner there are even "Couch to 5km/10km" and novice programmes for all distances.

All programs run through to race day and are designed to take the runner to peak performance on race day.

Always seek advice from a medical professional before commencing any training programme.



SELECTING THE RIGHT PROGRAMME

Use the training pace table supplied with each training schedule:

(An example for the Old Mutual Soweto Marathon is given on the next page to help you select the right programme.)

- Locate your best recent 10km (and marathon where relevant) times in top rows of the tables. Look only at your PB times over the last 5-8 months when assessing this section.
- Use the training programme, (finisher, sub 4:30, sub 4 or sub 3 hours) relevant to the table.
- If your 10km time is in a faster column than your marathon then initially use the paces in the marathon column and switch to the 10km paces after 4-6 weeks. If your time for the marathon is better then use the paces that relate to your marathon best.

Soweto Marathon 42km Training Requirements and Paces - Table 1											
Best 1500m time	4:15	4:38	4:52	5:24	6:00	6:35	7:13	7:46	8:01	8:22	n/a
Typical 10km time	33:00	35:45	37:25	41:40	45:50	50:00	54:30	58:20	60:20	62:50	80 mins
Best 42.2km Time	2hr 35min	2hr 45 min	2 hr 55 min	3 hr 15 min	3hr 35min	3 hr 55min	4 hr 15min	4 hr 35min	4hr 45min	4 hour 55 min	n/a
Indication of Soweto 42k Finish	2hr 38min 15 sec	2hr 48 min 30 sec	2 hr 59 min 10 sec	3 hour 20 min 20 sec	3 hours 41 min 40 sec	4 hour 3 min 20 sec	4 hour 25 min	4 hour 47 min 20 sec	4 hour 58 min 20 sec	5 hour 09 min 40 sec	n/a
10km Training Pace (per km)	3:25	3:40	3:53	4:20	4:43	5:05	5:32	5:50	6:10	6:25	07:10
5km Training pace (Per km)	3 min 8 sec	3 min 20 sec	3 min 33 secs	3 min 55 sec	4 min 20 sec	4 min 50 sec	5 min 20 sec	5 min 45 sec	5 min 55 sec	6 min 05 sec	n/a use fartlek
3km pace (per 200m)	34 sec	37 Sec	39 Sec	43 sec	48 sec	52 sec	57 sec	60 sec	64 sec	68 sec	n/a use fartlek
Easy pace to 1 hour	3 min 45 sec	4 min 5 sec	4 min 12 sec	4 min 32 secs	5 min 5 sec	5 min 30 sec	5 min 55 secs	6 min 25 sec	6 min 45 sec	6 min 55 sec	7 min 15 sec
Long Training Pace	4:05 mins	4 min 30sec	4 min 40 sec	5 min 05 sec	5 min 40 secs	6 min 5 sec	6 min 30 secs	7 mins 15 sec	7 min 25 sec	7 min 45 sec	8 min

NOTE:

- 1) Doing more than maximum is likely to result in overtraining
- 2) Peak training is based on 10-12hours per week training Doing more is unlikely to allow sufficient time for recovery unless you are a fulltime athlete
- 3) Keep easy runs easy and quality work in 400 and 1000m at suggested pace
- 4) If training in a race - keep it easy. You need to train slower than Om Die Dam pace to prepare your muscles and joints for running the Om Die Dam pace on race day - Or expect cramps from fatigued muscles!



PRINCIPLES WHEN TRAINING FOR A MARATHON

The following are short explanations of the critical concepts behind ALL the training programmes, which are available from the Old Mutual Training Centre (www.dogreatthings.co.za/running).

Overload and Recovery

Probably the least appreciated aspect of training is the need to balance the stress of overload with recuperative and beneficial periods of recovery. Too often training focuses on quantity and not the alternating between stressing and recovery.

When, for instance, we run fast downhill we inflict micro-muscle tears, which with the correct amount of blood circulation, rest, and nutrition not only repair but also allow the muscles to become stronger, and capable of handling greater load. This is the principle used by body builders who train one particular part of the body on say Monday and will not train the same muscles again until Wednesday or Thursday.

With running we have few options to change muscle use, (unless you take up triathlon or multi-sport) but we can vary the intensity and duration of training. That is the purpose of the short easy recovery run.

Many runners go out every day to aimlessly 'clock up' the kilometer's so the training log total looks good at the end of the week. This means they rarely edge to the outside of their current ability and so never inflict the micro tears required for improvement.

Alternatively others believe virtually every session has to be challenging and so never include short easy runs.

Another common mistake is to run all runs, and recovery runs in particular, at a pace that is too close to their current race pace (normally marathon pace). Either way they are inflicting more micro-muscle damage on already damaged muscles, which over time results in poor performance or injury.

Training and recovery work together like a pendulum:

If you want to be able to run fast in one session, you need to run very slowly to allow the circulation, recovery, and energy restoration, in others. Before you go out the door you should know, and stick to, the objective for each session.

One way we can reduce the damage of running yet continue to train the running muscles is to make use of the Elliptigo cycle, which mimics the running motion but eliminates impact. This is an ideal way of covering long slow sessions that are designed to improve the metabolizing of fat as an energy source. Of course the nature of the cycle also makes it a useful for rehabilitation of injuries.

The Elliptigo has caught the attention and recommendation of a number of Olympic athletes including multiple world record holder Haile Gebrselassie who is using them in his Ethiopian training camp.

Additionally standing and running on the bike teaches style and strengthens the core muscles, so there are multiple benefits to be had. These machines can now be hired in many venues around the country (www.elliptigo.co.za) so it can be added to your training when required. There are few better ways of rehabilitation from injuries.

The number of intense sessions you can handle per week will depend on your training age (the number of years you have been training), your chronological age and current ability.

Armed with this knowledge and keeping the primary principles in mind read the following notes and explanations to get the most out of your marathon training schedules:

- The combination of quality and distance makes the training schedules more difficult than it may seem at first sight. If, after the initial four to six weeks, you feel tired legged or generally fatigued then do not be afraid to replace one of the quality sessions with a short easier run. If you need more recovery, reduce, or take off any of the 30-50 minute easy runs, (6-10km) as these are primarily for recovery.
- DO NOT add distance to the schedule, as this will increase the risk of over-training and injury.
- Remember stress in other areas of your life, such as work or emotional stress can have a far greater effect on your ability to train. Where this happens, be prepared to reduce the overall training load in the week. The best performances come when all aspects of your preparation and life are balanced. Read the article on balancing physical, pharmacological and psychological on the Do Great Things articles/web pages.
- Do NOT go faster in training (track or long runs) than the paces shown. These paces are specific to your

ability and will improve key physiological aspects in your training. If you feel the session is too easy simply reduce the recovery time between efforts, as opposed to increasing the speed of the run.

- If you become injured, then for the first two weeks, start back at one level below (on table 1 paces) than the one you were on, then go back to your normal level.
- The aim of training is to create microscopic tears in the muscles so that with the correct amount of rest and the correct nutrition, the muscle will repair stronger. Stronger muscles, for the same bodyweight, will make you faster.
- The faster you can race a 5 or 10km, the faster time you can achieve over 21km, a marathon, Comrades or even 100kms. The quality sessions are amongst the most important sessions as they increase your overall capacity.
- Any new training will take 4 to 6 weeks to experience the benefit. Initially expect to experience 'heavy legs', which will disappear as training adaptation takes place.



TRAINING SCHEDULES AND SESSIONS

Quality versus speed sessions

I refer to all change of pace or faster paced sessions, such as track, hill or fartlek as 'Quality sessions,' because they are used to improve the quality of your running. I prefer not calling them 'Speed' sessions as this puts the incorrect emphasis on the objective. It is not about running these as fast as you can, but rather running them at a pace that is relevant to your current ability so that you will be able to handle a small improvement over the race pace and distance. The correct pace for your ability is shown in the table 1 associated with the downloaded training programme.

Running these sessions as fast as you can has no relevance to the distance you are training for and so it simply tires you out, which is one of the quickest ways to over-train and increase the risk of injury.

Warm up and cool down

Every 'quality' session (where there is speed) should be preceded by a warm up of about 15 to 20 minutes very easy running followed by some general light movement of joints (shoulders, hips, knees, and ankles) and any easing off of any tight muscles. Follow this with 2-3 gradual increases in speed over 60-80 metres then decelerate and walk back as recovery. This will prepare you for faster work to follow. After the faster work, jog easily for 10-15 minutes. Develop your own warm up that you can use not only for sessions, but also before races. Keeping the same warm-up/pre-race routine will improve confidence and relaxation before races.

An effective warm up for the beginning of a long run or early morning run is to run for 1 minute then walk for 1 minute, then run 2 minutes walk 1 minute - then run 3 minutes walk 1 minute and run 4 minutes and walk 1 minute. This means that your heart rate is gradually increased over the first 15 minutes of your run and you will feel the benefit of this throughout the remainder of your session, and particularly at the end of the longer runs.

Track sessions

Many roadrunners are apprehensive of track because they feel they must go as fast as possible. This is NOT the case. The attached table gives specific paces relevant to each target time/current ability. It is important NOT to go faster than these paces, and remember improvement comes from reducing the specified recovery time.

For instance a runner capable of a 54-minute 10km and targeting a 4hour 15 minute finish in the Old Mutual Soweto Marathon may be scheduled as a track session of 10 x 400m in 2 minutes 2 seconds with 90 sec

recovery. It is best to stick to this pace and reduce the recovery from 90 seconds to 75 seconds between the 400m. If that is still easy, do the next with 65 seconds recovery: if that is now too hard then drop recovery back to 75 or 90 seconds for the next. This teaches us to get more and more used to running at relevant paces, and makes the track sessions more enjoyable.

Fartlek

Fartlek strides: After the easy warm up as described above, pick up the pace for the count of 10 left foot strides, then go easy for the count of 10 strides, then fast for 20 strides, then easy for 20 strides. Continue in this fashion until you reach 60 fast strides, and then have around 3 minutes of easy running. This completes one set. The schedule will tell you how many sets to do in the session.

Timed Fartlek: This is typically shown as: Fartlek 5 x 1min hard 3min easy. After the warm up pick up the pace for 1 minute then run easy for 3 minutes, then repeat this 4 more times before commencing the cool down.

30 second session

This is an incredibly powerful session and a personal favourite. From the chart you are given two dimensions for instance 115m / 55m. On grass or other suitable flat surface, measure a rectangle with long side 115m and curved short side ends of 55 metres. After a warm up run the length of the long side in 30 seconds, and then slow to a jog to cover the short side also in 30 seconds. This takes you to the next long side, which you do again in 30 seconds, and then the next short side. The curve simply helps keep the continuous motion going, alternating between fast and slow running. Complete for the required number of laps.

This is a session you can use to replace most quality sessions if you are struggling for time. You can do the laps in sets of 5 and have 60-90 second recovery between the sets. It is a great stand-by session.

High-Octane session

This is a variation of the 30 second session in that it alternates short fast work with recovery periods however on this occasion the distance is fixed and the time for running each distance is varied. These are typically 200-metres fast with a 100-metre recovery run in the same time that was allocated to the 200m distance. A further variation is to use repeats of the 300-metre distance or distances with a short walk of 50m as recovery. As you are able to cope with this session change the walk into a jog.

Hills

Hill sessions are an excellent session for improving leg strength, speed and hill running style. Two types of hills are used.

Short steep hills

These focus on strength and should be done on around an 8-10% gradient. After the warm up, run hard up the hill for 35 seconds, noting where you got to on the path.

These should be hard runs but not flat out as the purpose is to drive the leg backwards which will then require a higher knee lift. Focus also on a backward arm action. The focus on driving backwards is important to style and form.

Jog very easily down to the start (ideally on grass), have about 15 seconds recovery and run hard up for 35 seconds trying to match the distance of the first effort.

Repeat this for the required number of times in a set, and then have the full recovery period specified before starting the next set. Then complete the required number of sets.

This is always a hard session as you are going hard up the hill in a slightly exaggerated style, but being short it is easy to focus on each run and pays great strength benefits.

Example

3 x 4 x 35 seconds with 3 minutes between sets. This means 3 sets of 4 repeats each being a 35 second hard run uphill, Jog down between repeats. After 4 repeats have 3 minutes recovery then do the remaining sets.

Longer shallower 200-300m hills – 5-8% gradient

This develops muscle endurance and hill running style. The same principles are applied to how the sets are done but here the idea is to run with a rhythm rather than push as hard as you can. Run the uphill about 5-10 seconds per kilometre faster than your best 5km race pace.

Pace runs

Those runs that alternate in running speed throwing in sections at marathon pace should be run on flat or very gently undulating areas. The idea is to get a feel for the relevant marathon race pace and these will build up in distance and number as the programme evolves.

The long run

The long run **is probably the training session most abused by runners.**

Far too frequently the long training run is run too fast. You will find considerable information and guidance on the long training run in the various articles on the web site. This session should be undertaken at an easy pace where your heart rate rarely goes above 70% of maximum.

A key way to ensure you are in the correct intensity zone is to use a heart rate monitor and keep the heart rate below $180 - \text{age} + 5$ (e.g. a 50 year old would use $180 - 50 + 5 = 135$).

There are many benefits of the long training run but some of the key focuses include:

- The low intensity running that enhances energy production by metabolizing fat.
- Improved blood flow to and through the muscles.
- Improved confidence to cover extended distances.
- The training of muscles as they act at lower running paces – This helps reduce the risk of cramping in longer event.

The use of the Elliptigo cycle for some of these long run sessions, particularly in the marathon or ultra training delivers many of the above benefits without the hammering and impact of running on the road. Of course it is not possible to do all such sessions on the Elliptigo cycle as the body still has to be trained to handle the impact to some extent.

Mixing running with walking has been around for years, (despite what some local commentators suggest). The early Comrades runners in 1921 and 1930's used running and walking in a 'Go-As-You-Please' format to complete distances, and Baden Powell, the founder of the Boy Scouts, used run one lamppost – walk one lamppost as a means of covering long distances and extending endurance.

The recent use of walks by Caroline Wostmann in her spectacular 2015 Comrades victory, simply brought this into the mass public limelight, many hundreds of runners have successfully used this process for years and some have even run Personal Bests over 5km with a 30 second walk after the 3km mark. It is not new and should be used by virtually all runners both in training and in racing, particularly the long distances.

It is without doubt better to use a 1 minute walk to take your drink in a long run than to stop for 5 minutes talking then to restart and then to expect to be able to run a race distance without a stop.

Running and walking is highlighted in all novice programmes, but can be equally effective in virtually all other programmes in the long run sessions. Try them out and find your particular favourite mix; Also notice the previous recommendation for mixing running and walking as a warm up prior to most sessions.

As a guide 3-hour marathoners may find a one-minute walk every 10 km (or 9km as it tends to be very 3rd water point), while 4-hour marathoner may prefer 90 seconds every 6km, and a 5-hour marathoner 90 seconds every 3km (every water point).

Where there are steep hills in one of the sections try a '2-minute run 1-minute walk' strategy for the long ascent and then return to the normal run/walk split as your return to more normal course inclines.

Enjoy the sessions

Training should not leave you totally exhausted, but should challenge you to finish the last effort in a quality session.

Once the recovery period is over you should feel you could manage one more if required to.

On the other hand easy runs/recovery runs should leave you almost re-energized so take them EASY. The longer runs are designed to enhance particular energy systems so they will leave you pleasantly fatigued. Don't worry about the overall distance of the run as physiologically we get all the benefits from long runs that need not every go longer than 2 hours 30 minutes to a maximum of 3 hours. Runs longer than this are more for the psychological benefit. Rather focus your long runs on comfortable easy running that will set a foundation.

Strength, weight, core and functional training

Ideally some run specific functional strength work should be included once or twice a week. This should augment and not replace running.

While weight training may be an integral component of the injury rehabilitation process under the guidance of your medical adviser, the more beneficial investment of time or strength training for most runners will be to target your core, and agility. (See specific article and directions on www.dogreatthings.co.za)

Gym work should focus on the core muscles groups used in running. Planks, side bends/planks, use of Bosu balls for single and double squats, and the use of the Functional or Suspension training equipment not only makes for tough and running relevant workouts, but are also extremely convenient for travelling and home use.

A 20-30 minute session on this equipment three times a week will help keep the body in balance, minimize the risk of injuries and give the strength and posture benefits that will improve your running.

If you do use a weight training session opt for a Step or Toning circuit aiming for 15-20 repetitions in each work period. As a change you can do 10-20 minutes of stair work, but start slowly and build up to 20 minutes.

An alternative here would be the step circuit session.

- Reduce to one session per week in peak week training.
- Gym should be placed on the easy days or after completion of quality sessions so that you still have the recovery or rest day for exactly that – recovery!
- Do not combine weight training with long run days.



BODY WEIGHT

Body weight is irrelevant. Rather focus on lean muscle mass and % body fat.

- Beware of excessively low body fat readings (men less than 8% and women less than 10% - measured by calipers) as this can upset your hormone balance / production.
- An increase in your body fat % and reduction in lean muscle mass during peak training may be a first indication of over training.
- Weight loss is greater from the quality sessions than long slow runs.



NUTRITION AND TRAINING

Without the correct food and nutrition your training is wasted. There is little point in undertaking a disciplined structured training programme if you are going to fill your body with totally inappropriate energy and building blocks to gain the benefit of your hard work.

Some of the major influences on each runner's daily energy requirement are:

- Lean muscle mass
- Age
- Amount of training and work activity
- Gender

Only a full assessment of your current diet can assess if you are getting enough calories, in the correct proportion to maximize the benefits of your training.

Banting/High Fat Low Carb Diets

- Put into perspective it is clear that the High Fat/Banting diet is correct for the general population, who do not run or exercise the amount a marathon runner will train over the next months. You may need to consider minor modifications when including regular quality sessions (as used in these programmes) or frequently racing.
- The more quality sessions, or races you do, the more you need to replace carbohydrates, but even in your peak training your total daily carbohydrate intake will be only around 150 grams and that should come from low/medium GI foods (see page 30 in Real Meal Revolution).
- A small amount (25 grams) of high GI immediately after a quality session or race will speed recovery process, but then go back to the principles of High Fat Low Carb and low GI for the remainder of the day. Fewer carbs and a greater reliance on metabolizing fat is possible on easy or long run days.

Fluid intake during exercise

Take about 250ml of fluid for every 30 minutes of training.

Ideally in races this should have about 10 grams of carbohydrate, and some electrolytes to help absorption. The normal use of carbohydrates should be based around low GI, with high GI limited to immediately after training or high intensity training.

On the run use low GI chews or the tablets that are easy to carry and remember the primary importance is the need to keep blood sugar level up. As a result the normal instructions on the pack tend to be excessive and will cause nausea in long events. Personal experience suggest that the normal recommendations for 45 minutes can be extended to around 60-75 minutes in the case of most gels or squeezies in a marathon or longer.

The use of a protein carbohydrate recovery drink immediately after more intense sessions or efforts, or on longer runs beyond 4 hours, will provide the needed balance of nutrients to speed recovery.

Many diabetics are able to use low GI sports drink but this should be done under the supervision of a doctor.

It's important to remember that all forms of concentrated energy, (chews, tablets, gels etc) are a compromise made in order to allow the runner to carry supplies with them. This means they will always need to be taken with fluid and the same guideline is a good start (250-300ml per 30 minutes).

As mentioned above most chews and gels are recommended at 45 minute intervals. Generally this is too frequent, particularly in longer, less intense events, and should be extended to around 60 minutes for events up to 5 hours and longer for the ultra or Comrades distances. The best solution is to test this in training runs.

Looking more specifically at hydration, particularly where there are hot summer conditions and/or high humidity, there is a need to have some basic guidelines. Using the 250 to 300ml of water per 30 minutes as a good starting point you can adjust for conditions and your desire to drink. Experiment in training to determine your individual needs. In areas such as Durban and Dubai runners generally find it better to drink **smaller** amounts more frequently.

It is important to ensure drink contains a good level of sodium to assist fluid absorption, but remember drinking too much fluid has more dangers than finishing slightly dehydrated (see below).

As far back as 1920's Arthur Newton (five time Comrades winner) made his own drink using homemade lemonade, salt and sugar. This is still the basis for many sports drinks and meets most of the fundamental requirements, but the addition of bi-carb or soda turned this into an alkaline drink that was known as 'corpse reviver' and was found to assist runners particularly in the longer runs. This is the foundation of some (re-)hydration drinks and proves very useful both on the long run and as an after training drink to bring you back to correct hydration levels.

The problem with overhydrating is that the electrolytes become overly diluted and the body waterlogged, which can result initially in similar symptoms to dehydration, but then sees the runner lose consciousness. This potentially has fatal consequences whereas dehydration results in the runner (sportsperson) grinding to a halt as the body protects itself.

The message should be clear: rather slightly less drinking than over-hydrating. The 600ml per hour is a reasonable rule of thumb to work from, and then find your own specific level during training runs.



EQUIPMENT

Shoes

The extremely high proportion of running injuries can be traced back to runners being sold the incorrect style of running shoes, a lifestyle imbalance or sudden increase or incorrect training paces.

It is no co-incidence that most leading manufacturers are now moving towards more flexible shoes, some replicating the flexible actions of 'bare-foot' running! Unless subject to extreme pronation or supination problems your choice should be towards purchasing a neutral shoe, which can then, have minor adjustments and inserts made to suit your individual needs.

The most efficient and natural running style is to land on or just behind the ball of the foot, with a rear driving action. In other words running is about driving the foot and leg back behind the centre of gravity and not about landing in front of the hips and body.

It is not possible to get into this efficient position with rigid shoes (as they don't bend to allow placement under the hips) or shoes with large drops in height between the heel and the midfoot.

While such rigid and high heeled shoes are suitable and recommended for the world's 'jogging/health' market, runners in South Africa finish races at faster paces, (only 50% of the New York Marathon finish under 5 hours), and so South African runners will benefit from more flexible, lower heeled, running shoes.

Runners who have previously used rigid/high heeled shoes need to make a gradual transition to the more natural running style, which is why Newton and Zola Budd have shoes that assist runners to land on the mid to fore foot, and these are used two to three times a week to gradually educate the runners into a more efficient style.

Do not rush this process. Once you have used these shoes (tools) on a regular basis you will graduate to using them in normal training, but the first stage is to use them to assist in getting you into the correct running style. They should therefore be initially considered as 'tools'.

Each person has a unique running style, but the principles of efficient running are universal and can be taught with a couple of specific sessions then refined with training and coaching. Group or individual sessions can be arranged to let runners feel the difference between efficient and forced running styles.

Socks are the second most important item of running kit. Select socks that are made from wicking materials that remove the moisture from the feet and that reduce the risk of blisters.

Compression Wear

Although we have known about the power of compression in treating injury for years, it is only recently that the full potential of compression clothing to improve sports performance has come to light.

In the same way that compression socks improve circulation and help prevent DVT when flying, compression clothing offers substantial benefits to runners:

- Compression of an injury – speeding up return to training
- Speeding up recovery from hard sessions
- Preventing muscle breakdown in racing

- Reduced sweating rates and better cooling
- Reduced chaffing
- Better recovery from flying

In short, the use of compression tights has been shown to provide significant improvement in endurance performance. By improving your rate of recovery, you can train sooner and achieve more.



SAFE RUNNING

Wherever possible:

- Run on pavements or facing on-coming vehicles
- Wear reflectors when the light fades or use lightweight flashing lights (there are many available from cycle shops)
- Wear bright coloured (white, yellows or fluorescent) clothing
- Run in groups – but not more than 2 abreast
- Keep off freeways
- If alone carry a cell phone (women particularly) with an emergency number in speed dial
- Women should consider taking the Woman In Power (WIP) course, which teaches easy to learn and use tactics to fight off any attacker
- Use a dry-pack to keep sweat and water from the phone



ILLNESS INJURIES & MUSCLE SORENESS

Whatever you do, get early attention to any injury or illness.

- Be extremely careful of running while taking any medicine.
- Try to avoid anti-biotic medicine. Expect a 3-week drop in performance after completing anti-biotic treatment.
- Many homeopathic remedies can assist, if taken at the first symptoms of illness.
- If you have Cold or Flu symptoms in the chest or below the head then do not train or race.



MONITORING: GPS & HEARTRATE

The combination of GPS and Heart Rate provides runners with direct step-by-step feedback of “EFFORT” and teaches pacing, both of which are vital to the successful distance racer. GPS technology displays pace (in minutes per km), the current distance (km), your heart rate, altitude and lap and split time every step of the way.

The latest heart rate Suunto monitors, (such as the Ambit Range), record heart rate variance, which provides a number of benefits including the notification of how much time is required for recovery after each session. Runners should monitor this as a guideline to their weekly effort to ensure they do not overdo the training.

Other online software such as First Beat can be used in many models to keep a log of the EPOC (a measure of effort) for sessions, which additionally provides information on the burning of fat and carbohydrate in each session, or throughout the day. This will prove particularly useful for those runners who recently switched to a Banting approach to nutrition.

The most efficient way to race is to maintain constant EFFORT throughout a race. Automatic lap alerts notify the runner after each kilometre, eliminating the need to press buttons or search for km marks, making it ideal feedback during training.

On hilly or challenging courses effort is indicated by the combination of pace and heart rate and so this can be monitored to provide more sensible pacing.

For example if you monitor your heart rate while running 6 minutes per km on the flat, then use the same heart rate while climbing a hill, the effort of both will be around the same percentage although the pace on the flat will be 6 minutes per km while it may drop to 6 minutes 50 seconds per km up the hill.

With the leading GPS sports watches providing an 8m per km accuracy any venue can be turned into a track for interval sessions, and post session download provides detailed analysis of the session or race in graphic and tabular format.

When purchasing a GPS watch the best advice has to be to invest in the most expensive one you can afford at the time. The problem is that once you have the technology and see the benefits you want to get more. Also look at the battery life and the ability to download.

Please also remember that GPS watches always read longer than the race distance (by roughly 8m per km) so a 10km will tend to show as 10.08km and a marathon as 42.54km. These routes are probably correctly measured and not long, so please factor this into your race plans.

TRAINING PACE EFFORT & INTENSITY		
ZONE	HEART RATE CALCULATION	DESCRIPTION
A	Lesser of 55-65% max HR or 180-age	Long slow distance or recovery runs.
B	65 - 80% Max HR	Medium distance steady/runs.
C	85% Max HR	Time trial or threshold training.
D	85 - 90% Max HR	Interval sessions longer than 400m.
E	90 - 95% Max HR	Quality work of 400m or less.

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2016

THE OLD MUTUAL COMRADES

PREPARATION AND TRAINING INSTRUCTIONS

Preparation guide for the 91st Comrades Marathon on Sunday 29 May 2016

This guide will provide your day-by-day training schedule, which you can personalise for your own specific current ability. In addition this write-up provides details and recommendations across the four complimentary topics that ensure your success.



WHAT IS THE STRATEGY?

The true Comrades training commences in mid March, which gives you 10-12 weeks of focus on Comrades. January and February are more about getting into the rhythm of training, introducing and improving the quality of training or getting to your qualifier.

One of the biggest challenges for South African runners is that most people commence long distance training too soon. This means they are injured or over trained by the time they line up at Comrades. Trying to train hard and focus for more than ten or so weeks is asking for trouble. (Bruce Fordyce ran his best times when he was injured in February – Nic Bester ran his best when he did Leppin Ironman – which was held in February and prevented him from doing too much running).

THE FIVE FINGERS OF HOLISTIC PREPARATION

Sportsmen/women always talk about the **physical training** towards the next challenge. Too much focus is put on the number of kilometres per week, and not enough on training smart.

Smart training balances technique, style, quality and endurance with recovery, and takes a holistic approach.

Physical training should also be complimented and intertwined with **logistics, nutrition, mental preparedness and skill preparation.**

By addressing all five aspects, your confidence grows through to 29 May 2016 when you will be ready to tackle the 91km down run from Pietermaritzburg to Kingsmead Stadium in Durban.

Over the next months a number of articles will be posted on Do Great Things (www.dogreatthings.co.za and FB page Norrie Williamson) dealing with other aspects of the overall Comrades preparation including tapering, final preparation, energy on the run and race day issues.



MORE ABOUT COMRADES MARATHON?

Over **20 000** runners have already committed to the 2016 Comrades Marathon.

Time will tell as to how many make it to collect their numbers, how many survive the training, how many make the start line and how many have the honour of finishing across the line at the Oval to collect that special 91st medal.

The **KEY** to successful progression is to have a detailed understanding of the challenge of Comrades. It has been said 'if you don't know where you are going, you are likely to end up somewhere else and not even know it!'

The more you study the goal (of finishing Comrades), the more you become intrigued and involved - the greater your motivation and greater the desire to succeed. This will help you through the tough times in training and on race day, Sunday 29 May 2016.

HERE'S A BITE-SIZED INTRODUCTION TO THE COMRADES MARATHON...

The first race was held on 24 May 1921 as a down run from Pietermaritzburg City Hall to Durban City Hall to commemorate the memory, spirit and camaraderie of the 'comrades' of those who fought in the 'great war' (World War 1) from 1914 to 1918.

Vic Clapham was the founder of the race. In those days a high percentage of the route was off-road, taking more direct lines up the massive hills and valleys between the two cities. Comrades was never intended as an easy task, but one requiring runners to stare adversity in the face, then to overcome it, as the soldiers had done. The intention was that the runners should experience a similar spirit and camaraderie by hauling their tired and damaged muscles over the greuling 90km distance.

The 91st Comrades is a "DOWN run" with the first 20km of the race climbing up to the Umlaas Road. Over that initial distance there is less than 7km of downhill. The climb to Camperdown is far tougher than even the more experienced runners can remember from two year previously!

Over enthusiast starts and poor pacing see the majority of runners attacking this section too fast, which results in over 90% of the field being forced to struggle their way over the final 17km downhill section from the Cowies Hill in Westville.

"Up or down Comrades is an experience where each runner discovers his or her strengths and limits - **it will humble you.**"

IZOKUTHOBA

Statistics have proven that many Comrades runners are well ahead of their average goal pace, not only through Camperdown, but also through half way... but the writing is on the wall and these runners are forced to walk much of the easy downhill from Westville into Durban, losing massive amount of time.

As the top runners (Kotov, and Fordyce and co) have proved if you run the initial 25km conservatively it is possible to fly down the section from Cowies to the finish in better style and achieve good times.

The history of the race is brim-full of stories of runners who pit themselves against the Comrades, overcome their particular challenges, and went on to achieve the growth and success that comes from completing the Comrades Marathon. The more you read of the Comrades history the more you know that 'impossible is only a perception'.

The closest finish in Comrades history occurred in the 1967 down run that finish in the DLI Hall at Greyville Race course when Scot Tommy Malone (Germiston Callies) was leading the race but being chased down by Savages Manie Kuhn.

Malone entered the finish and was handed the traditional Baton with the Mayor's message headed towards the line, but turned and pushed for the line as he heard the roar associated with Kuhn's sprint arrival behind him.....

Surging and stretching to break the line, Malone, cramped and collapsed at the line as Kuhn burst through to take the honours a second ahead of his good friend.

It's never over until... it's over!

Good things can always happen when desire, determination and commitment over-ride your normal levels of fatigue and exertion.

Following the advice of holistic preparation provided here and on www.dogreatthings.co.za/running will help demolish our self-imposed restrictions and negative perceptions. We then come to the realization of what is possible when structure, emotion, desire, belief and willpower are combined with physical training.

This is the life changing opportunity that awaits every Comrade's runner.

These schedules are supported by regular articles and posts on the www.DoGreatThings.co.za web site.

There are also a number of seminars and talks being held around the country.

For details of venues in Johannesburg, Pretoria, Polokwane, Cape Town, Vaal triangle and other centres, email norrie@coachnorrie.co.za

Additional advice can be found by following:

Twitter
Facebook

Coachnorrie1
Coachnorrie



PHYSICAL TRAINING – DAY BY DAY SCHEDULES

Table 1 compares performances at distances from 1 600m to the marathon and provides the paces to allow each runner to personalise the Day-by-Day training schedules to your specific ability.

As you improve you personal best at the shorter distance you can adjust your training paces in the day-by-day schedules. In this way you optimise your training.

The three different outline schedules are:

- The Vic Clapham Finish (12 hours) through to 10 hours 30 minutes:
- A finish between 10:30 to 09:30
- A 09:30 finish to a solid Bill Rowan medal time.

Keep in mind only 17% of the field earn a Bill Rowan and 8% earn silver medals on a Down Run. Be realistic in your choice of programme.

TABLE 1

RECENT RACE BESTS				TRAINING PACE - MINS PER KM						
1600m best	5km best	10km best	Marathon	3km	5km	10km	21km	42km	Base	Recovery
9:11	30:40	63:50	04:50	n/a	n/a	06:24	06:36	06:48	7:55 to 7:15	8:45 to 7:55
8:50	29:50	61:50	04:40	n/a	n/a	06:10	06:18	06:30	7:40 to 7:00	8:30 to 7:40
08:30	28:25	59:30	04:30	n/a	05:35	06:00	06:05	06:18	7:20 to 6:45	8:10 to 7:20
08:15	27:15	57:00	04:20	n/a	05:22	05:46	05:55	06:03	7:00 to 6:27	7:50 to 7:00
07:50	26:22	54:45	04:10	n/a	05:07	05:33	05:40	05:50	6:45 to 6:15	7:35 to 6:45
07:28	25:12	52:20	04:00	04:53	05:02	05:09	05:30	05:41	6:36 to 6:09	7:27 to 6:36
07:18	24:40	51:15	03:55	04:47	04:56	05:02	05:22	05:34	6:29 to 5:54	7:19 to 6:29
07:08	24:10	50:15	03:50	04:41	04:49	04:56	05:15	05:27	6:22 to 5:47	7:08 to 6:22
06:58	23:40	49:00	03:45	04:34	04:43	04:49	05:08	05:20	6:15 to 5:42	7:01 to 6:15
06:49	23:10	47:45	03:40	04:22	04:32	04:42	04:56	05:13	6:02 to 5:27	6:48 to 6:02
06:40	22:40	46:35	03:35	04:17	04:26	04:35	04:49	05:06	5:55 to 5:21	6:41 to 5:55
06:30	22:00	45:45	03:30	04:11	04:20	04:28	04:45	04:59	5:48 to 5:16	6:34 to 5:48
06:18	21:30	44:30	03:25	04:05	04:14	04:21	04:40	04:52	5:41 to 5:09	6:27 to 5:41
06:08	20:50	43:10	03:20	04:00	04:08	04:15	04:35	04:45	5:35 to 5:04	6:20 to 5:34
06:00	20:20	42:35	03:15	03:54	04:02	04:08	04:28	04:38	5:27 to 4:59	6:13 to 5:27
05:50	19:50	41:15	03:10	03:49	03:56	04:02	04:20	04:31	5:20 to 4:55	6:06 to 5:20
05:40	19:20	39:45	03:05	03:41	03:48	03:52	04:10	04:24	5:09 to 4:38	5:49 to 5:09
05:30	18:50	39:00	03:00	03:36	03:46	03:45	04:05	04:17	5:02 to 4:33	5:42 to 5:02
05:20	18:20	37:50	02:55	03:30	03:38	03:38	03:57	04:10	4:45 to 4:28	5:35 to 4:45



TRAINING SCHEDULES AND SESSIONS

QUALITY VERSUS SPEED SESSIONS

I refer to all change of pace or faster paced sessions, such as track, hill or fartlek as 'Quality sessions,' because they are used to improve the quality of your running. I prefer not calling them 'Speed' sessions as this puts the incorrect emphasis on the objective. It is not about running these as fast as you can, but rather running them at a pace that is relevant to your current ability so that you will be able to handle a small improvement over the race pace and distance. The correct pace for your ability is shown in the table 1 associated with the downloaded training programme

Running these sessions as fast as you can has no relevance to the distance you are training for and so simply tires you out, which is one of the quickest ways to over-train and increase the risk of injury.

WARM UP AND COOL DOWN

Every 'quality' session (where there is speed) should be preceded by a warm up of about 15 to 20 minutes very easy running followed by some general light movement of joints (shoulders, hips, knees, and ankles) and any easing off of any tight muscles. Follow this with 2-3 gradual increases in speed over 60-80 metres then decelerate and walk back as recovery. This will prepare you for faster work to follow. After the faster work, jog easily for 10-15 minutes

Develop your own warm up that you can use not only for sessions, but also before races. Keeping the same warm-up/pre-race routine will improve confidence and relaxation before races.

An effective warm up for the beginning of a long run or early morning run is to run for 1 minutes then walk for 1 minute, then run 2 minutes walk 1 minute - then run 3 minutes walk 1 minute and run 4 minutes and walk 1 minute. This means that your heart rate is gradually increased over the first 15 minutes of your run and you will feel the benefit of this throughout the remainder of your session, and particularly at the end of the longer runs.

TRACK SESSIONS

Many roadrunners are apprehensive of track because they feel they must go as fast as possible. This is NOT the case. The attached table gives specific paces relevant to each target time/current ability. It is important NOT to go faster than these paces, but improvement comes from reducing the specified recovery time.

For instance a runner capable of a 54-minute 10km and targeting a 4 hour, 15 minute finish in the Old Mutual Soweto Marathon may be scheduled a track session of 10 x 400m in 2 minutes, 2 seconds with 90 sec recovery. It is best to stick to this pace and reduce the recovery from 90 seconds to 75 seconds between the 400m. If that is still easy do the next with 65 seconds recovery: if that is now too hard then drop recovery back to 75 or 90 seconds for the next. This teaches us to get more and more used to running at relevant paces, and makes the track sessions more enjoyable.

FARTLEK

Fartlek strides: After the easy warm up as described above, pick up the pace for the count of 10 left foot strides, then go easy for the count of 10 strides, then fast for 20 strides, then easy for 20 strides. Continue in this fashion until you reach 60 fast strides, and then have around 3 minutes of easy running. This completes one set. The schedule will tell you how many sets to do in the session.

Timed Fartlek: This is typically shown as: Fartlek 5 x 1 min hard 3 min easy. After the warm up pick up the pace for 1 minute then run easy for 3 minutes, then repeat this 4 more times before commencing the cool down.

30 SECOND SESSION

This is an incredibly powerful session and a personal favourite. From the chart you are given two dimensions for instance 115m / 55m. This means measure out on grass or other suitable flat surface a rectangle with long side 115m and curved short side ends of 55 metres. After a warm up run the length of the long side in 30 seconds, and then slow to a jog to cover the short side also in 30 seconds. This takes you to the next long side, which you do again in 30 seconds, and then the next short side. The curve simply helps keep the continuous motion going, alternating between fast and slow running. Complete for the required number of laps.

This is a session you can use to replace most quality sessions if you are struggling for time. You can do the laps in sets of 5 and have 60-90 second recovery between the sets. A great stand-by session.

HIGH-OCTANE SESSION

This is a variation of the 30 second session in that it alternates short fast work with recovery periods. However on this occasion the distance is fixed and the time for running each distance is varied. These are typically 200-metres fast with a 100-metre recovery run in the same time that was allocated to the 200m distance. A further variation is to use repeats of the 300-metre distance or distances with a short walk of 50m as recovery. As you are able to cope with this session change the walk into a jog.

HILLS

Hill sessions are an excellent session for improving leg strength, speed and hill running style. Two types of hills are used.

Short steep hills

These focus on strength and should be done on around an 8-10% gradient. After the warm up, run hard up the hill for 35 seconds, noting where you got to on the path.

These should be hard runs but not flat out as the purpose is to drive the leg backwards which will then require a higher knee lift. Focus also on a backward arm action. The focus on driving backwards is important to style and form.

Jog very easily down to the start (ideally on grass), have about 15 seconds recovery and run hard up for 35 seconds trying to match the distance of the first effort.

Repeat this for the required number of times in a set, and then have the full recovery period specified before starting the next set. Then complete the required number of sets.

This is always a hard session as you are going hard up the hill in a slightly exaggerated style, but being short it is easy to focus on each run and pays great strength benefits.

Example – 3 x 4 x 35 seconds with 3 minutes between sets. This means 3 sets of 4 repeats each being a 35 second hard run uphill, Jog down between repeats. After 4 repeats have 3 minutes recovery then do the remaining sets.

Longer shallower 200-300m hills – 5-8% gradient

This develops muscle endurance and hill running style. The same principles are applied to how the sets are done but here the idea is to run with a rhythm rather than push as hard as you can. Run the uphill about 5-10 seconds per kilometre faster than your best 5km race pace.

PACE RUNS

Those runs that alternate in running speed throwing in sections at marathon pace should be run on flat or very gently undulating areas. The idea is to get a feel for the relevant marathon race pace and these will build up in distance and number as the programme evolves.

THE LONG RUN

The long run is **probably the training session most abused by runners.**

Far too frequently the long training run is run too fast. You will find considerable information and guidance on the long training run in the various articles on the web site. This session should be undertaken at an easy pace where your heart rate rarely goes above 70% of maximum.

A key way to ensure you are in the correct intensity zone is to use a heart rate monitor and keep the heart rate below $180 - \text{age} + 5$. (e.g. a 50 year old would use $180 - 50 + 5 = 135$)

There are many benefits of the long training run but some of the key focuses include:

- The low intensity running that enhances energy production by metabolizing fat.
- Improved blood flow to and through the muscles
- Improved confidence to cover extended distances
- The training of muscles as they act at lower running paces – This helps reduce the risk of cramping in longer event

The use of the Elliptigo cycle for some of these long run sessions, particularly in the marathon or ultra training delivers many of the above benefits without the hammering and impact of running on the road. Of course it is not possible to do all such sessions on the Elliptigo cycle as the body still has to be trained to handle the impact to some extent.

Mixing running with walking has been around for years, (despite what some local commentators suggest).

The early Comrades runners in 1921 and 1930's used running and walking in a 'Go-As-You-Please' format to complete distances, and Baden Powell, the founder of the Boy Scouts, used run one lamppost – walk one lamppost as a means of covering long distances and extending endurance.

The recent use of walks by Caroline Wostmann in her spectacular 2015 Comrades victory, simply brought this into the mass public limelight, many hundreds of runners have successfully used this process for years and some have even run Personal Bests over 5km with a 30 second walk after the 3km mark. It is not new and should be used by virtually all runners both in training and in racing, particularly the long distances.

It is without doubt better to use a 1 minute walk to take your drink in a long run than to stop for 5 minutes talking then to restart and then to expect to be able to run a race distance without a stop.

Running and walking is highlighted in all novice programmes, but can be equally effective in virtually all other programmes in the long run sessions. Try them out and find your particular favourite mix; also notice the previous recommendation for mixing running and walking as a warm up prior to most sessions.

As a guide 3-hour marathoners may find a one-minute walk every 10 km (or 9km as it tends to be very 3rd water point), while 4-hour marathoner may prefer 90 seconds every 6km, and a 5-hour marathoner 90 seconds every 3km. (every water point)

Where there are steep hills in one of the sections try a '2-minute run 1-minute walk' strategy for the long ascent and then return to the normal run/walk split as your return to more normal course inclines.

Enjoy the sessions...

GYM TRAINING

The best training for running is running, but to run correctly you need to have a strong core and good functional movement.

This has become considerably more critical in modern day living where we are glued to desks computers and daily imbalances with minimal exercise.

The first addition to physical training should be in core work and functional body exercises. These require only small home equipment or bodyweight.

I now have a small kit that I travel with for my overseas or long trips, and a full set of exercises are explained on www.dogreatthings.co.za (or see the video on my face book page Norrie Williamson) in an exercise article.



LOGISTICS

SET YOUR GOAL TO FIND YOUR DIRECTION

Every time we drive a car, get a bus or taxi, or even walk somewhere we know three things:

1. Where we are now
2. Where we want to be and
3. How we are going to get there!

It's vital to be able to say the same of your running.

If you are reading this then you have an idea of where you want to get to, that's Comrades finish line, but can you be precise?

You need to define exactly where you want to go, before you can determine how you are going to get there.

Achieving a specific Comrades time requires you to be able to achieve certain times at shorter distances. It is only then that you have to cover the relevant training for the Comrades distance.

Some runners may desire to win a comrades silver or Bill Rowan medal, but if they can only run 50 minutes for 10km time, they need to adopt a two or three year project to get there. This journey may seem long, but there are always stepping stones along the way.

Attempts to fast track the journey nearly always end in sorrow or injury, because you are trying to achieve too much too soon.

So before you even commence your training for Comrades, take the first steps:

- Find out about the challenges of the race
- Determine what you want to achieve (time and or medal colour)
- Determine where you are now (use your current PB's and table 1)
- Select the training programme that you can manage to take you along the route
- Review to see how far along the road you were by 31 May 2015
- Make your 2016 goal a stepping-stone towards 2016 and beyond.
- Don't be scared or pressurised: Be willing to take 2-3 years to achieve your long-term goals at Comrades – it's not a race to be rushed.

COMMIT

Having identified the goal, you can adopt the appropriate physical training programme. However this means nothing if you fail to consider other basic logistics:

- **Race Entry:** If you have not already entered 2016, then it's too late for this year unless you can get one of the substitution entries by April 2016. (see www.comrades.com) Without an entry your Comrades game plan will now have to be a two-year project.
- **Basic Planning:** The down run commences at the Pietermaritzburg City Hall. With around 17 000 runners and their supporters getting to the start can be a nerve-wrecking experience, so it is best to book your overnight in Pietermaritzburg where you can walk to the start. Make and book your travel plans – NOW! With 60% of the runners from outside the province do you want to be the one with the mad scramble for flights, accommodation, and transport?

SEEDING AND QUALIFYING

- The world's top athletes restrict racing to only 2 marathons a year, in order to reach their best. Your prime-racing goal is on 29 May, and all other races over 15km should be restricted. That does not mean that you cannot use races for your long runs, but rather that you need to keep the pace in these runs to a true training pace. (Normally your Comrades pace or slower) racing breaks down whereas training is supposed to build you up towards your goal.
- Do NOT waste effort or risk injury by **racing** a qualifier. Do the minimum necessary to get a seeding position relevant to your marathon ability:

For a:

- Silver medal (sub 7:30) – run a 3:19 marathon for B batch
- Bill Rowan medal (7:30 to 9:00 hour) – run a 3:59 marathon for D seeding (3:45 is borderline Bill Rowan)
- 10 hours to 9 Hour finish – run a 4:19 Marathon for F seeding
- 10 Hour to 12 Hour finish or for novices – Run a 4:59 marathon

RUN AND WALK IN RACES AS YOU DO IN TRAINING

- The 90km distance is a 5 1/2 to 12 hour "journey" and must be approached as such. There are only around 70 runners who may feel the need to run non-stop in the challenge for top honours. The vast majority of participants will perform considerably better by adopting a regime of running and walking throughout the whole event.

Typically this will result in walks every 6 or 8 km for 2 to 3 minutes. This run/walk system brings faster recovery, more consistent pacing and even personal bests. In training, most runners 'stop' regularly to have a drink of water - so why expect to run 90kms without stopping on 29 May? It was no coincidence that Caroline Worstmann walked to her victory in 2015, nor Carol Mercer for first South African in 2001 and many others to gold medals – BUT it is planned and a strategy (NOT when you are tired)

- Adopt the run and walk regime in all runs longer than 20km and in the qualifiers and short ultra events. This will give you the confidence in the regime for race day.

INJURIES AND ILLNESS

This is also a logistic consideration: **Running injuries are all self inflicted!**

That is to say they come from running: not from being tackled or hit, but by over-doing the simple action and impact of putting one foot ahead of another too many times for the **current strength or condition** of the muscle, tendon, ligament or other body part.

For this reason virtually all symptoms of injuries will disappear without assistance of any medical professional if you simply stop running. By stopping training you no longer subject the injured part to the force and therefore it is allowed to repair and recovery.

This is where the use of an Elliptigo bike can assist both in preventing injuries and as a method of rehab to get you back on the road earlier.

The bike mimics the exact running action but without the impact of foot against the ground. Additionally you stand in the correct posture and use the correct running style to drive the pedals, so this improves running efficiency.

Using this as a regular training tool 2-3 times a week gives all the benefits of correct training, but without the impact, which effectively means the ability to increase training volume.

You can try the Elliptigo in most centres (www.elliptigo.co.za) as they can be hired and they are available at selected gyms (BodyCycle in 9th Ave, Morningside, Durban, deals only with functional training and rehab 083 500 1222)

Correcting the injury

The MOST important aspect of an injury is to determine the cause, which requires an experienced eye and will normally be related to running style, shoes and lifestyle.

Analysing running style, ensuring you have the correct shoes for efficient running, and maintaining a balanced posture and body will not only sort out injuries, but also help to prevent them from occurring.

Do not commence training with an injury or niggle. Get it analysed and attended to immediately. The two most likely causes of injury are incorrect shoes (see below) or posture and lifestyle. The latter is about your body structure and this is pulled and held out of position by the things you do every day at work and living. It is this imbalance that results in the injury when running.

Choosing running shoes that enable you to learn the correct running posture and to run in a driving position, will assist in efficiency and over time reduce risk of injury.

If you are currently in rigid or structured running shoes, the more flexible shoes should be used as tools on quality sessions a couple of times a week, and only used for long distances once you have fully transitioned to the style and shoes.

Running is a symmetrical sport in that to run in a straight line you need to have the same stride length with your left leg, as you do with your right leg.

Carrying bags (or children) on one side, sitting at an angle, crossing legs or working at a skew are all influences that can initiate injuries. Remember your body is put through these skewed postures for as much as 8-12 hours in a day. However you run for only about 1 hour, so the biggest influence and source of imbalance/injury does not come from running. It comes from everyday work and habits.

(Phone 083 445 5200 for assistance in assessing your style and posture imbalances – You can be taught to change your style in around 1 hour)

Imbalances result in one leg working more than the other, which leads to muscle overload when running. The cause of the injury is generally not at injured point, but at the weakest link in the legs, hip or back. Identifying the cause is the only way the injury can be solved and prevented.

Being structurally sound and working on your core strength is key to the prevention of injuries and efficient running. There are products that assist you to sit and work in a correct position.

An injury between March and May can have a devastating effect on your preparation for the race. Preventative action is better.

Illness

Illness follows a similar approach. Any sniffles, coughs or irritations that currently exist need to be addressed immediately. Rather two weeks of treatment now than recurring time off training over a number of months.

There are the prophylactic approaches such as having a flu injection in February or March, and taking a broad spectrum multi-mineral, vitamin and anti oxidant type supplement during the periods of heavy training.

When illness or injury does strike

- Get early attention to any injury or illness.
- Immediate self help with PRICED – Protection to prevent further injury, Rest of injured part, Ice regularly, Compression around injured limb (see compression clothing), Elevate to minimise swelling, make Doctor, Chiropractor or Physio appointment (appropriate medical professional).
- In the case of injury have the cause identified by a running style and body structure analysis (see above 083 445 5200).
- Be extremely careful of running while taking any medicine. Try to avoid antibiotics. Expect a 3-week drop in performance after completing a course of antibiotics. If you take antibiotics after April, give serious reconsideration to your participation in Comrades 2016.
- Many homeopathic remedies can assist, if taken at the first symptoms of illness.
- If you have cold or flu symptoms in the chest – or below the head – then do not train or race.

EQUIPMENT

Even in the moderate climate of coastal KwaZulu-Natal there is a need to have different types of clothing to cater for the variety of training environments over the next months to Comrades. The temperature variation in other provinces is even greater requiring more options.

Over and above the need to dress for the heat or the cold, modern clothing has performance enhancing qualities. It simply does not make sense to commit to a major sporting goal, undertake the sacrifices and training required to get to your peak and then handicap yourself by failing to capitalize on the latest technology available.

Hats, Gloves, Rain jackets and Carry-bags

These are all things that you will not only use in training, but may wear on race day. Over the next months try, test, and select the items that you may use on race day. Research the latest available options. For example: basic hats tend to keep the heat in, causing overheating. Today there are specially designed running hats, which cool the head keeping you cool.

New technology exists in UK and USA for headbands, and peaks, which can lower skin temperatures by over 6 degrees. Simply by wetting.

With performance levels not only dictated by the actual heat, but also by the mind's perception of heat, keeping skin cool can make a substantial improvement in how you run in long hot races.

Once you have identified your ideal hat or peak ensure that the branding on the hat meets the IAAF advertising rules, so that you can use it without being questioned by officials. (One single 15cm² logo on hat as guideline). Any headgear that is within the limits of the IAAF rules can be worn in any race in South Africa.

Compression Wear

The benefits of compression in injury treatment are well known, but compression clothing also improves sports performance and recovery. In the same way that compression socks improve circulation and help prevent DVT when flying, compression clothing offers substantial benefits to runners:

- Compression of an injury – speeds up the return to training
- Speeding up recovery from hard sessions
- Preventing muscle breakdown in racing
- Reduced sweating rates and better cooling
- Reduced chaffing
- Better recovery from flying

Additionally compression can be used to relax tight muscles, including legs, backs, and shoulders simply by sleeping in tops and bottoms overnight.

More detailed explanation on why compression works www.dogreathings.co.za/running

Socks

Socks need to be bought to complement your shoe choice and should be carefully selected to fit your particular needs. The use of wicking materials removes water and sweat from the feet and the differing thickness and styles will depend on the extent of each individual's foot movement in their shoes.

Shoes

As noted above (see Injuries) a high percentage of running injuries can be traced back to incorrect shoe selection. Amazingly the shoes on sale in South Africa imply that over 50% of the population suffers from 'over-pronation'! – This has come down dramatically (by over 20%) over the past years. Runners are now seeing the benefit of being in the correct shoes. It is no co-incidence that most leading manufacturers are now moving towards more flexible shoes.

A visit to Comrades Museum to see Fordyce, Robb, and other top runners' shoes will convince you that using low flexible shoes is the way to go, but you have to train and adapt to them, not just use them on race day.

Unless afflicted by **extreme pronation or supination** problems you should choose a neutral shoe, which can then, if necessary, have minor adjustments and inserts made to suit your individual needs.

In particular **more flexible shoes** are the normal requirement for quality and faster sessions or short racing. Many calf problems arise from insufficiently flexible shoes being used in faster work. Attend one of the running style and shoe seminars as indicated on www.coachnorrie.co.za or send a mail to norrie@coachnorrie.co.za to arrange for personal running style, shoe or injury analysis and advice.

Most importantly: Making the transition from a rigid shoe to a more efficient and natural running style takes time and must be done gradually. This is one specific area that the Newton shoes that Zola Budd-Pieterse has brought to South Africa fits perfectly.

Initially use these shoes as a "tool" to teach and guide you in to a more natural style, by using them in a form session twice to three times a week. Simply start by 20-30 minutes of 40-100m repeats at 10km pace or slower and a walk recovery and each time focus on using the correct natural style. Combined with some running drills and core exercises, these sessions will help you to make a transition to a natural style in all training, with minimal injury risk. In time you will be able to extend the Newton use into distance runs. It is the four or five pods on the underside that help put your body into the correct position.

More advice on www.dogreathings.co.za/running or Newton running.



NUTRITION AND TRAINING

Without the correct food/nutrition your training is wasted!

Sport supplements are not a magical elixir to be taken in the days before a race, but are products that should be taken to augment your normal diet to ensure you have the right balance of carbohydrate, protein, fat and micronutrients. Most importantly not all supplements are equal in quality or credibility: Don't always assume the bigger servings or more expensive are better: research the company and product constituents thoroughly.

In the sports nutrition industry "what you see is not always what you get!"

BANTING/HIGH FAT LOW CARB DIETS

- Put into perspective it is clear that the High Fat/Banting diet is correct for the general population who do not run or exercise the amount a Comrades runner will train over the next months.
- The more quality sessions, or races you do, the more you need to replace carbohydrates, but even in your peak training your total daily carbohydrate intake will be only around 150 grams and that should come from low/medium GI foods. (see page 30 in Real Meal Revolution)
- A small amount (25 grams) of high GI carbs immediately after a quality session or race will speed recovery process, but then go back to the principles of High Fat Low Carb and low GI.

Now consider the five prime components of your diet as runners:

CARBOHYDRATES

- Carbohydrates are the primary energy source of faster running, but do NOT repair muscle (see protein)
- Carbohydrate 'powers' the brain – If you run out of carbohydrate you will have difficulty doing basic calculations and feel disorientated or irritable.
- Various carbohydrates are absorbed at different rates, stimulating different insulin reactions. The rate of absorption is called Glycemic Index (GI). Glucose has the fastest absorption with a GI of 100. Generally a healthy diet focuses on low/medium Glycemic Index foods, whereas immediately after training we look for high GI foods, to replace energy fast and to assist in protein absorption.
- Low/Medium GI foods include vegetables, beans, oats, sweet potatoes. High GI foods include white potatoes, cornflakes, and banana. (see www.gifoundation.co.za)
- Aim to make the majority of your carbohydrate energy from low/medium GI foods particularly in peak training.
- Use recovery drinks and meal replacements which provides a mix of quality protein, carbohydrate and medium chain fats and a combination of amino acids and glutamine, as a 200-250ml 'food' drink in runs and races over 4 hours, and also as a recovery from quality sessions or in peak training. This is one of the most efficient ways to replace carbohydrate and commence the essential recovery process.

Gels, energy chews and the like are a compromised option for energy on the run. Ideally we would like to get carbohydrate from a solution, but that is impractical to carry so squeezies were developed in mid 1980's. It is important to use it correctly and to remember that the longer the race, the lower the amount of carbohydrate required per hour in drinks, as the primary concern is to fuel the brain – too much carbohydrate will make you nauseous when running 4 hours or more.

If using these gels, chews or squeezies:

- Take around 2-3 mouthfuls of water with each bite or chew.
- Mix in your mouth before swallowing
- The shorter and faster the race the more carbohydrate is used per hour. The body has capacity for about 90 minutes to 2-hour events.
- NEVER take energy gels with sparkling drinks, as this will also invoke nausea.

PROTEIN

- Protein repairs the muscle damage from training.
- Only 1.2 grams of protein per kg of body weight is required in normal training and about 1.6 grams per kg bodyweight in peak training
- Typical servings of protein, (20 grams), include: a chicken breast, 2 eggs
- A 500ml serving of a quality meal replacement drink after training will kick-start the recovery. The combination of protein, carbohydrate and a mix of essential fats will provide a foundation for your recovery, particularly for those who have difficulty eating before or after exercise or finding good mid day meals. This meal replacement drink can also be used in events longer than 4 hours, and at 2-hour intervals after the first 3-4 hours of running on 1 June.

FAT

- Fats are an essential part of an athlete's diet.
- Fats are responsible for correct hormone production, which in turn is essential for regeneration and growth of the body.
- Balance the amount of saturated fats from animal sources, and maintain higher percentages from fish oils, olive oils, oats, avocados, flaxseed, and some nuts
- Aim for about 2 grams of high quality Omega 3 fish oil per day
- Supplementation with essential fats has been shown to increase sports performance, reduce inflammation, and assist in treatment of Alzheimer's, Parkinson's, depression, dyslexia and many other diseases. It's worth reading more about essential fats.

FLUID INTAKE DURING EXERCISE

- Drinking too much is more dangerous than too little. Being dehydrated will cause a loss of performance, but over drinking (particularly on the long runs or races) can cause death.
- In normal conditions consuming 250 to 300ml per 30 minutes is a good starting point but be guided by conditions and your desire to drink. Experiment in training to determine your individual needs.

- It is important to ensure drink contains a good level of sodium to ensure fluid absorption.
- Take fluid with any carbohydrate or food that is taken on the run. For ultras over 7 hours plan around 5% solution rising to around 7% for 4 hours and a max of 10% in shorter events. (5% solution means 50 grams carbs in 1 litre of water).
- Look for a quality oral hydration drink as this will also tend to be alkaline (most energy drinks are acidic) which is how the 'corpse reviver' used by the old Comrades runners as far back as 1920's was formulated – salt, sugar, sodium bicarbonate and the old fashioned (real) lemonade.
- Remember in normal circumstances runners will/should finish slightly dehydrated at the end of a race (under 2% loss of bodyweight). In humid conditions, (particularly coastal Eastern Cape and KwaZulu-Natal) the need to drink and cool core temperature becomes greater as the humidity reduces the effect of the normal cooling process. This should not be seen as an excuse to over-hydrate, but rather will force a reduction in effort/pace.

Warning: Taking too high a dilution of carbohydrate drink, or too many gels etc will cause you to feel nauseous. It seems better to use gels at half dosage around 80-90 minutes apart. Try to minimize use. More is **not** better.

VITAMINS & MINERALS

Taking a balanced multivitamin, mineral, and antioxidant formulation, preferably in a slow-release format, provides a basic insurance against the losses and deficiencies created by extensive training. This combination and vitamin C and zinc lozenges, Echinacea, (a homeopathic remedy), MSM and Glutamine can all assist in maintaining and improving your immune system.

BODY WEIGHT (AND WEIGHT LOSS)

- **Weight is irrelevant:** Rather focus on **Lean Muscle Mass and percentage body fat.**
- Beware of excessively low body fat readings (men less than 8% and women less than 10%) as this can upset your hormone balance/production.
- An increase in your body fat percentage and reduction in lean muscle mass during peak training may be a first indication of over training.
- Weight loss is greater from the quality sessions than long slow runs.



MENTAL PREPARATION

How is it possible that a mother, who struggles to lift a 10kg bag of potatoes from a shopping trolley, can lift the rear of a car with one hand and pull her son or daughter out from underneath with the other?

Same woman, same muscular strength and physical condition but staggeringly different outcomes!

Whether in sport or life we need to acknowledge the tie between physical capacity and emotional desire.

We are what we believe we can be, we do what we believe we can or need to achieve!

Overcoming the adversity of the Comrade's challenge is as much an emotional test as it is a physical test. From the race leader to the last runner crossing the line, around three-quarters of the distance into the race, we question our motives, desires and commitment for taking on the challenge.

If we have the reason; if we have the desire: it takes us to levels beyond the physical emotion and pain every runner feels after 64km. If we can't find the reasons to fight the pain; if the exhaustion and pain exceed the rewards of crossing the line; then we find the reasons to slow down, stop, or pull out.

In short to be successful you must have the desire to achieve. The 'reason' is not actually that important, it simply has to be important to you and come from deep inside.

Physically the signs of fatigue, and our perceptions of what we are capable of achieving restrict our performance.

In truth we can physically do perhaps two to three times more than our perceived ability, but our brain, (the governor system as Professor Tim Noakes named it), restricts us so as to be operating well within our safe limits. This way we prevent ourselves from physical damage.

In engineering terms this is a factor of safety.

What has this to do with training for Comrades? – Everything!

Successful Day-to-Day training gives us confidence for race day.

The intensity and achievement of our day-by-day training, (as with any race day), is based on our beliefs of what we think we are capable of. When we try to exceed this the brain sends a series of indicators to tell us we are getting close to our 'perceived' limits.

For example: If we can run a 10km in 55 minutes, then when we run 4 x 1000 in 5:25 with 2 minutes recovery we get to the third run and we start feeling tired because our logic tells us that the pace and that number of one kilometre repeats must be a tough session so we are going to feel tired.

Many runners find that if they run without their watches they are capable of going faster in the time trial or short race simply because they don't know what the time is, or what speed they are running, therefore they don't know to look for fatigue signals.

The reality is that under stress our mind tends to tell us why we can't do something rather than how well and strong we are: 'Why do we default to negative thoughts – 'Always believe that something wonderful will happen' - Simply remembering this phrase and thinking about it in the run changes the outcome... become positive and the level of fatigue drops!

It is always worthwhile running a 4-5km time trial or park run once a month flat out without a watch as you will then run on perceived effort and often find your training has made you stronger and faster, which will then allow you to adjust future training paces.

Physiologically, since training is about damaging muscles then having enough recovery to let them get stronger, there is every reason to support a principle where we train only four times per week.

Psychologically however we have been conditioned to believe that more is better. More kilometres per day or week; more training sessions per week; more and faster speed; so a major contribution of the physical training session is the psychological boost we receive from it.

Put simply, the more we train the more confident we get. This is not because we are in any better physical shape, but purely because we increase our confidence by increasing our training; (even if it is breaking us down).

The long run is a typical example of this: There is a myth that to be able to run comrades you must run 64km in training. If that were true then how was it possible for malnourished, untrained prisoners in Japanese POW camps to march 80km between camps at a days notice?

Be it the ultra runner, the prisoner of war, or the watch-less runner in the time trial, it is clear that the mind tends to have a negative impact of on the performance.

We can turn this around by focusing on the gains made in each training session.

To do this it is vital that you know exactly what you wish to achieve from each session, be that recovery, improved strength, flexibility, core strength, endurance or speed.

Simply acknowledging the impact of training on confidence can change your outcome in a race. Work on this with each and every session you do: remind yourself what's going to improve, and how it will improve your Comrades performance.

On race day we need deep-rooted emotion to keep us going, to break through the barrier. This will be developed over the buildup months. Finishing Comrades needs to become something so important that we believe that if we fail to achieve the goal then the sun will not rise on Monday 30 May! When it's that important we can ignore the signs of fatigue, we can ignore the doubt that exists, the pain in the legs and we burst into a new realm of ability.

How do we develop such belief? By becoming emotionally involved in all aspects of the race; Read and learn about the history of the race. Know what it meant, know why it was started, the tradition you are continuing and attach 'purpose' to your participation in the event. Run for a charity to assist others that can't help themselves, run in the memory of someone close. Simply put: run for a cause that you feel obligated not to let down. This level of commitment is developed over the months of training and builds up to race day: It commences now with the first day of training and is carefully cultivated through to race day.

The mental preparation becomes even more critical in the final month, and will be covered in detail in articles posted later on www.dogreatthings.co.za

