PRACTICAL ASSISTANCE RUNNING CIRCULAR.

INTRODUCTION.

This circular has been compiled to assist people who are either intending to begin running for health improvement, or who are already running, or even competing.

Whilst everything in this circular is applicable, and helpful, to the elite runner's life, the circular does not detail at all the specific training processes which racing requires.

The focus of this Circular is Run to Live, not Live to Run, (the racing perspective). Regardless, racing can bring health benefits. But even a life of never racing is just as healthy and enjoyable. This circular is primarily about health through easy running.

We have indexed the sections with headings which are a brief description for each of the topics of consideration explained in more detail in the paragraphs which follow.

It is possible that any reader will already be well aware of much of the content. It would be beneficial to health to learn all the headings at least as a way of life, if not a rote learnt text. Living healthily is the real goal and these topics are a broad set of principles.

We hope that the simple sentence headings enable easy memorization of these crucial lifelong rules. Then the body of text can become habitual, not needing memorization. We want you to enjoy your life, to enjoy improving your body health daily forever.

We see the future of Australia as needing a fit, healthy, happy population. From this will follow sensible action which this nation, and the world, must achieve.

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1 RUN ON GRASS OR DIRT TRAILS OFTEN

Grass or dirt, or sand, will allow longer output runs, or walks, with less impact to the bone joints of the feet, ankles, knees, hips, spine and even shoulders. The damage which hard surfaces causes brings pain and long term injury which can prevent running, or worse. The longer runs will bring better cardio results but even disregarding that benefit it is not in your interest to run on hard concrete or roads which will injure your structure. It is likely that your grass runs can be longer and more regular, and stimulative to heart / lungs and legs. Over ten years or more of running the long term damage of hard surfaces can be terrible. Grass and dirt seem to do less damage and the body is able to repair at an ongoing rate which sees little or no long term damage. Avoiding shops, traffic in general crowds at beaches or promenades, and dog walking areas are smart moves.

2 EAT A WIDE VARIETY OF LIGHTLY PROCESSED FOOD

The single most accurate sentence which describes the ideal food intake for humans is this. The wider variety is more likely to provide the huge quantity of vitamins, minerals, micro nutrients, correct carbohydrates, proteins, fibre, water, oils, acids, trace elements, starches, co reactive substances, and other essentials. The less processed are most foods, particularly fruits, vegetables, grains, nuts, the more valuable to diet. Most cooking and addition of such items as salt, sugar, preservatives, and other items, reduce food value. To get your protein, you must learn what you need for your age and exercise intensity regime. You may need to study protein sources and choose which ones you prefer, lean meat, fish, lentils, combined vegetables. A diet where you are lacking protein will cause "seeking" for protein and may lead to excess fat and sugar consumption in the "hunt". Research has found that over consumption may be related to seeking protein. A small tin of fish frequently will help in protein supply and joint oils. Avocados can provide similar. Skim milk and most beans are protein sources. However you may not enjoy these foods or have intolerances. Older people often get their energy food, but neglect the re-building food. Breakdown or atrophy can result. Some other diet components are also often missed in the older person diet as their total food consumed is less than when they were under 50. Vitamin C is in citrus fruit, parsley, capsicum or other sources, or can be derived in tablets regularly. Vitamin C is crucial in infection prevention and collagen rebuilding tissues. Iron in meat or leafy green vegies or a weekly tablet. Exercise breaks down red blood cells which carry oxygen to the muscles. We need the iron for their replacement cells. Also, for bone and muscle function, calcium from milk or cheese or a supplement. For carbohydrates, and for nerve function, we can eat grains and cereals which have Vitamin B. Grains also have cellulose, which is a complex carbohydrate that humans cannot digest, but which stimulates the motility of the large intestine as we try to do so. This flushing of the bowel is very beneficial. The cellulose absorbs water and assists in formation of excrement which is not blocking. Some days can be useful where we do not eat at all till the afternoon, or have only an apple, an orange and a banana or other fruit, until mid day or later. This results in a feeling of lightness and gives "the system" a well earned rest. Eating fruit every day, at least a mandarin, or a banana, is a good habit for life. Eating "low GI" (less sugar) foods as much as possible in preference to high glycaemia foods can protect the pancreas and results in less low blood sugar tiredness periods. High blood sugar causes excess insulin secretion from the pancreas to return blood sugar to tolerable. Often with an over- reaction bringing a low blood sugar tiredness. Gut Bacteria is the emerging giant in diet. Future study as this science develops in coming years will be the greatest diet information you can learn.

3 WALK SOME PARTS, AND REST, AND ENJOY GREENS GOLDS AND BLUES.

When you are out running, it is in no way recommended by any study that you should run the entire time. You may walk for anything from a minute to hours at the start of a run, or in the midst or at the end, or in some parts in a variety of walking, running and even sitting down for a long rest. The humans who walked out of Africa so long ago did not run all of their daily journeys. The idea is to comfortably increase your heart rate for a period not painful to your legs. The ideal is to use energy stored as glycogen, or fat, in this manner without illness. The mental comfort of noticing colours, smells, sounds, feels of rain or plants, is a joy of life running gives. Light reflected from trees and sky is a stimulus to our minds which can cause health benefits and pleasure. An entirely pleasurable experience will see you more willing to get out regularly even on bed days. Pain is not an objective in becoming healthy. Both mental and physical enjoyment will benefit the body. Every sensory input can uplift.

4 SLEEP EASY AND COMFORTABLE

Sleep is the body physical repair time and the mind must also perform physical chemical processes during it. It is crucial that we accept that the things which we must do in coming days can not be accomplished whilst lying in bed and that we must think of thoughts which are calming and assuring of our progress in life. Take time to find which blankets, sheets, pillows, open or closed windows, clocks or radios or lights, are helpful or annoying. Then create the sleep environment which is correct for you. If you awake then decide if it is a toilet matter, food, water, or other issue causing the interruption. Gradually improved sleep can be found. Make notes?

5 TAKE REST DAYS, WEEKS, MONTHS.

The body is damaged and must repair after running. Sometimes even modest runs can accumulate damage in a part of the body which is not as advanced in development as the rest of it. A knee or an achilles can often need several weeks for the cells in them to develop sufficiently to cope with the forces that the other leg muscles can exert. Blood chemistry can become disturbed by protracted training and other stresses to "the organism", you, and this can take weeks to be returned to balance, as for other "illnesses". The main part of exercise is absorption and adaption. That is REST. You can almost not do too much rest. Age requires longer recovery to work. Without adequate rest exercise is merely injury and will ultimately injure or sicken you. If the legs are "dead" or almost painful to run on, then clearly a very light work load only should occur. The use of much walking, fast or slow, or swimming, cycling, or rowing, should be considered. Further damaging the muscles will reduce repair processes and ultimately inhibit health gain.

6 THE BODY MAINTAINS WELL EVEN IN LOW OR NO TRAINING PERIODS

The body does not lose structure quickly. Google has many sites which give "cell life and replacement periods". Much of the body has several weeks as cell life and this means that the present state of the body is likely to be stable throughout periods of holiday breaks, illness, injury or high employment work task loads. Some diminishment will be inevitable. The fundamental structure is slow to build and slow to rescind. Less is better than too much. Training response is better to stress that is not damaging. "Healing" (response) is slower as we age. So if the family or work commitments reduce training availability, relax and repair.

7 YOU CAN RUN THREE TIMES YOUR NORMAL DAY DISTANCE, SO RELAX

The body will "super compensate" by a factor of nearly three for stresses placed upon it. Relax and trust it. Evolution has you covered and while it is best to rarely put this to the test, it is amazing when you have to.

8 DRINK WATER AND DRINK MORE WATER

Most Australians are de-hydrated most of the time. Reasons vary. Lack of drinking of water. Salt in diet. Coffee or other diuretics. Sugar. Air conditioning de-humidified air. A hot dry country. Alcohol. Drink water. Every day, through the day, not just after a run, but at any time, small and regular sips of water are a health need. Running causes water loss of almost a litre per hour, or far more on some days. When running for more than 40 minutes it is sensible to have at least 200ml every 15 minutes. (By drinking 200mls at home we can count how many swallows it requires.) A loss of more than 2 litres (about 90 mins running, possibly far less on hot days) may cause severe muscle damage which can never be repaired, or worse, death. The least it does is slow us. Carbohydrate needs water to be stored as glycogen (about 75% water) in muscles and liver. The kidneys need constant toxic waste removal flushing. The cooling of the brain and organs often uses water body water storages. Thus blood pressure and oxygen delivery is maintained at correct flows and pressures. A good practice is to drink at least 2 glasses early after sleep as there is transpiration water loss overnight, resulting in morning partial dehydration upon awakening. Regular drinks of water through each day should produce a need to urinate two or three times across the course of the day. A clearer output is generally a better indication. After running the blood volume is depleted and the single most important requirement immediately is water.

9 YES YOU CAN EAT SOME JUNK FOOD

Of course you can not totally, and immediately, change your lifelong enjoyments, nor do you need to. A general and lifelong move towards less salt, less sugar, less saturated fat, more fibre, more raw foods, is the aim. There are inevitably parties and festive seasons which should be enjoyed with relaxed participation.

If you have occasional chocolate then even this is a source of calcium, protein, flavenoids and anti oxidants. Life needs to be lived within the social framework which is comfortable and there is ample time to be very careful to consume only raw fruit, vegetables, nuts and boiled fish etc to move towards more health. Of course the one thing which is always crucial to remember is to clean your teeth. Brush well and floss them. Get regular checks. Sugar in foods feeds mouth bacteria and their excrement is the acid which causes decay. Bad teeth can kill you!

10THE HEART AND LUNGS ARE GETTING BIGGER

The body adapts almost every cell from head to toe as a response to running. Two dramatic and major influences to endurance improvement are the heat volume and lung volume which running increases quickly. The muscle walls of the heart and the diaphragm rapidly strengthen and lengthen, increasing blood / oxygen.

11 THE MUSCLES, CELL WALLS, ARTERIES, VEINS, CAPILLARIES, ALVIOLIE, ARTERIOLES, BLOOD VOLUME AND HAEMOGLOBIN ARE ALL INCREASING.

These are some of the other significant responses the body makes, which are often in non-synchronised levels of development, which may mean some periods of "awaiting" catch up can be required. The important thing to never forget is that a vast array of changes are in progress and their development is never "linear".

12 THE BONES, LIGAMENTS, TENDONS AND CARTILAGES ARE STRENGTHENING AND THE BONE ENDS ARE SMOOTHING.

These are some of the "pain givers". The cells develop strength and growth occurs in many areas but often with nerve irritation during the process, almost constantly at times. Particularly young runners may suffer with bone growth unmatched by ligament length (Osgood Schlatter). Allowing the body to adapt at its own speed is the safest process. This may mean easy months, or even an easy year. The benefit in late life is worth it.

13 QUICK AND SHORT ARE USEFUL. PUSH HARD A LITTLE BIT SOME DAYS,

There are masses of research now proving the huge benefit of some very intense training in small amounts and with recovery times between efforts. HIT. High intensity training, not just for competing athletes, but for every one, has been found to enable higher blood sugar tolerance which lessens diabetes susceptibility.

HIT stimulates mitochondria and seems to slow ageing. HIT maintains very good heart, lung and muscle tone. For competition it is essential as means to enable lactic acid tolerance and increase heart pericardium. Put in a couple of max run speed bursts for about one minute each week. (Probably on grass or a soft surface in best for this) Recent study shows that a couple of weekly 1 minute max cycle or run periods will change the body response to elevated blood sugar thus enabling its utilization rather than insulin conversion to adipose. Thus the onslaught of sugar from one source or another may be less devastating to body weight. The intense short bursts also have a heart pericardium enlargement benefit and lung volume enlargement.

Try to occasionally fit in a 50% longer run, or swim, or bike ride, cardio session, perhaps every second or third week on a Sunday morning. This may leave you very flat for a couple of hours, after the workout, as your body slowly re-absorbs water and fuel. This develops a massive number of minor improvements in the body. Lung deep Arterioles, deep muscle capillaries, heart volume, lung volume, liver glycogen stores, leg (or, swimmers shoulders) glycogen stores, blood iron, blood fat utilization process. Vary your exercise / training locations, courses and times of day, speed, direction and intensity in various sections. Care always, but occasional effort.

14 HILLS ARE GOOD IN MODERATION

For much of the same reasoning as point 13, there are benefits in hills. Actual leg muscle strength is improved with stride length benefits. Downhills cause concentric contractions of the thighs (quadriceps) which are dealing with up to three times body weight due to gravity in landing. Care is needed and adaption time and rest. The results over years are astonishingly good for later life bone and muscle strength and co-ordination. Short steps going uphill; liken it to a low gear high revs engine. Slight forward lean going downhill is less quadriceps stress.

15 BIKES AND SWIMMING ARE HELPFUL

Any aerobic (with oxygen, not breathless) exercise is life improving, and bikes and swimming are almost as beneficial as running, or more so if injury is prevalent in runners. The "cross training" benefit to running has been proven by triathletes for 40 years. The benefit of enabling specific muscle groups (quads, calves) to rest while the heart and diaphragm are used otherwise is massive. The mental variance is often stimulating. Research now finds that variances such as dancing, tennis and basketball, or swim or ride, build cross fibres unique fitness.

16 GET FIT BY 100TH BIRTHDAY

You will not reach peak in a year, you may reach near peak in two years if all goes perfectly. The point is that we exercise and run to become healthy and have improved quality of life forever. There should be no huge rush as adaption can be slow and mental "burnout" is more likely if health becomes a tedious chore. The attitude that we are aiming for a very, very long and very healthy life, with good capacity to enjoy ourselves, should be the foundation principle of our every day regime. The mental calmness of assured patience wins. Regardless of age, all people, (except perhaps the absolute premier athletes), will see an improvement period of 5 to 10 years, if not even twenty years. To understand this is to relax and believe that bad days, weeks, months, where no progress is apparent, are a passing moment and that just as a tree grows at varied rates, so do humans develop at differing rates. Never think that you are not going to be healthier in the future. (Keep calm and run on!)

17 STUDY ANATOMIES, PHYSIOLOGY, DIET, AND OTHER SCIENCE ALWAYS

The more knowledge you attain, and understanding of your body and its processes, the more committed you will become to its preservation and development. Knowledge will increase efficiency in the undertaking. Study of every aspect of the body, diet, exercise results, shoes, injury treatment and avoidance, are helpful. Understanding what you are doing and what is happening to you is always needed for health in life. Given a free Lamborghini with the proviso that you read the service manual, wouldn't you? Your body is worth much more!

18 LIFT A FEW OBJECTS WITHOUT OVERSTRAINING

Careful lifting of objects is a lifelong benefit. Strength of lower back, abdominals (stomach) arms, wrists, shoulders (trapeziums)(deltoids), upper back, chest (pectoral) all help us right through life. Too many Australians reach senior years having neglected entirely these areas, even though they have walked or run. The result is tragic when a fall or suffer other body contact (car crash). Strength work improves muscle and bone strength and improves the body "powerhouses" which are in each cell, the mitochondria. Lifting also produces anti-oxidant chemicals in the body, now seen as cancer inhibitors. Neural endorphins are stimulated and heart strength. Extreme care and usually qualified advice are recommended prior to embarking on lifting work. The abdominal muscles hold the internal organs in place and aid breathing and digestion, and defecation. Sit ups and other work are a lifelong health aid as abdominal strength is a crucial at all ages and in all acts in life.

19 YOUR FEET ARE NOT LUMPS OF MEAT

The feet are vitally important in health maintenance and in running in particular. Many people ignore them or take them totally for granted until a problem presents. If we maintain strength and length of the three layers of muscle which form the lower side of the foot then we are able to nearly prevent a myriad of other problems. The arch spring bridge of the lower foot is crucial to shock absorption in foot landing and drive off in stride. This also controls the stability and angle of the ankle (talus and calcareous) which in turn effects the tibia and fibula, lower leg, and then effects the twist strain on the knee joint , hips, spine and neck. A wall with a crooked foundation will always be precariously balanced. The pains which manifest right up the body are horrendous. Your shoes must be in good order, and the running surfaces, the quantities and intensities, must respect feet. Many simple exercises for strength and flexibility in feet will develop feet the work like a tigers paws. Pulling against toes or lifting towels, or "clawing" sand, can develop arch muscles. Pull toes gently to stretch arches.

20 SMALL STEP STARTS

Particularly as we age, or if we are very new to running, or we have just awoken and arisen, we must allow our bodies to put blood into many tine areas to create natural lubrication of joints, muscles sheath sliding smoothly and muscles to have blood vessels enlarge due to demand. As a car needs to be driven gently until the metals are warmed and less crack prone as malleability arises, so do our bodies need small light steps which do not over stress any component prior to working temperature state is reached and all blood vessels and synovial joint fluids are ready to accept the work load. Russian dancers gliding with tiny steps are a useful mental image. When starting any run, allow your body to move blood around to where it is being needed, this takes a little time so start with very short steps, almost like a Russian "sailing" ballerina. The joints are bloodless and take several, possibly 20, minutes to be functional. This tends to be longer as we age. It may take 20 to 30 minutes to "flow" when the body is more than 50 years of age. The brain is still probably 20 years old but for some reason joints, ligaments, and blood vessels and muscles have aged and need time to function well.

21 DOWNSTAIRS BACKWARDS

This particular advice is relevant to every person but more so to people over 50 years where balance, body weight, reactions, vision and even leg strength can make every set of stairs a huge risk. Many Australians fall or sprain ankles, knees, or do other damage on stairs every day. Sadly often tragically. The simple act of coming down backwards, regardless of "dignity, vanity, or humiliation", would almost totally prevent this. Especially in the mornings, come down the stairs backwards, holding the rail of course. Just DO IT. Live.

22 DO NOT PUSH CARS, OR LIFT BIG BOXES, OR WHEEL BARROWS.

Although you have cardio vascular aerobic fitness and good leg strength from running you need to know your limitations, particularly as you pass 40, more so 50 and very much after 60. It is too easy to feel great all over and to try to help someone by pushing a car, a piano, lifting a heavy motor or wheeling a loaded wheel barrow. Stop and think, a good rule is that : If I can not do this with ONE hand then I should not attempt it with two? You can tear muscles off bones, snap ligaments, break bones, rupture muscles, all very surprisingly easily. The healing process is long and painful and often without complete recovery. Achilles tendons are the bombs. Think, think before anything you do, even lifting beer out of the car boot. Prepare, do it slowly, assessing.

23 MIND YOUR BACK

A simple lift of a bag from the back seat of a car could put you out of action for six months. Think before you lift or twist using your back. Be warm, be upright and moving around for some time prior, not straight out of bed to help bring in a basket of washing to beat the rain. Ping! A disc is squeezed out and now presses on a nerve between two vertebrae. It may never quite be the same and it will send pain down your legs and tighten the muscles at the back (hamstrings) or muscles in the lower back as they try to hold you in a no pain shape. Long term light exercises and flexibility stretching are a good attempt at insurance. Warm up is still the best. Mainly, keep loads close, not too heavy, back straight, shoulders back, and if it's too much for ONE arm, stop. Get a firm mattress and a good lounge couch as these two items are where we spend much of our free time.

24 YOU CAN CALCULATE TIMES IF COMPETITION IS YOUR AIM, BUT WHY?

A further paper will be prepared for competing athletes and the mathematics of time prediction will be dealt with in detail in that paper. For the health seeking runner you may simply wish to calculate what time to allow for a longer training run, or a run in a new area while on a holiday. In general you can assume that a double of distance will see about a 5% increase in time each "half" across all distances. Allow more like 10% on runs more than 1hr.

25 THE SHOES ARE YOUR ONLY PROTECTION, GET GOOD ONES.

Shoe comfort, arch support, stability, shock absorbance, and flexibility are crucial for protectio0n of soft tissues in the foot. If you ever bruise a hand palm bone on a hard car steering wheel you will experience almost a hammer blow like pain at a light touch to it. The feet are no "tougher". Nurse them and they will serve you. More padding or insoles as we age and the body fat pads under the feet are less, so bone soreness is more likely.

26 FITNESS IS COMPLETING LIFE'S TASKS COMFORTABLY, NO MORE.

Being fit and healthy is the first and most important goal in your running life. Competitive running is fun if you are properly prepared and you accept the sacrifices of training and the recovery processes. Racing is close to being injured or ill, especially longer and tissue destructive races. Try to be healthy and energetic always not constantly tired, lethargic, near having a cold and sleep disturbed. These are over exertion signs. Illness.

27 MARATHONS CAN HURT YOU A GREAT DEAL, EVEN THE PREPARATION.

Marathons can do serious damage and even the preparation can also. A healthy person never needs to run a marathon. However, if that is your desire then allow at least two years preparation, preferably three, and be very gradual and rest conscious in the "build up" for the event. The topic will be covered in the next paper.

28 PEOPLE IN YOUR LIFE SHOULD HELP YOUR MENTAL STATE.

The brain and the body are deeply interactive and so mental comfort, and physical health, are intertwined beyond our comprehension at this time. Certainly health needs both mental and physical states to be well. Your family, neighbours, friends, work associates, and your attention to media figures must be positive. If you find that these are not positive then you must systematically determine why, and what to do about it. You may be the problem yourself. You may need to adjust to gain mental calmness. Think carefully and act.

29 USE EXCEL, OR SIMILAR, AND ANALYSIS TO REVIEW YOUR POSITION.

Record keeping, in an excel Spreadsheet or similar, will encourage your regularity of training and enable a long term analysis of progress, mistakes, successful strategies and also some limited forward predictions. Even though health, not racing, is the main goal, it is reassuring to be able to review past weeks, and years.

30 LEARN EVERYTHING ABOUT RUNNING, READ BROADLY.

Reading magazines, newspaper and internet articles can provide enormous valuable insight into health matters in general and running related considerations in particular. The more information we acquire across diet, physiology, anatomy, diet, exercise response, hydration, shoes and alternative or supplementary activities, the more effective and efficient will be the "work" we undertake in the pursuit of lifelong health. You will also find great "out of print" sport, or running Books, in OP shop, and you can feel good for donating to one charity cause or another .

31 HUMILITY PHD MEANS SILENT LISTENING AND CONTEMPLATION.

As we hear countless new theories and criticisms of exercise, particularly running, it is likely that conflicting opinions, or even data, can be presented. We each have differing results using the various methods of seeking fitness and health. We may then dispute some other advice, or even data, but a quiet contemplation is suggested as there may be new facts that have recently come to light, or we may have not interpreted the original concept correctly. Much "old" knowledge was essentially correct, a great example being faster intervals, which were always a disputed area, but recent science has enabled better understanding and advice.

32WEIGH YOURSELF REGULARLY

Body weight is among the most important things we can ever manage and to do so needs regular weighing. It is the "speedometer" of our fitness and we need to know it, occasionally record it, and to react to it. Possibly more danger quickly is shown by a severe drop in body weight. More loss than 1kg per week is fraught with danger of malnutrition of essentials. Christmas and New Year celebrations, along with tiredness from late functions of the season, will often see as much as 2kg increase in a week, or 5 in a month. Annoying but not dangerous or alarming. Constant monitoring gives motivation to then return to a fitter weight.

33 TRAIN SPECIFICALLY FOR SPECIFIC ACTIVITIES

Any person who participates in a cardio vascular exercise program such as swimming, running, cycling, will usually achieve above an untrained person when attempting an alternate event which is new to them. There are considerations to be made when we go to snow ski or skin dive as we have heart lung and endurance fitness but we may not have specific muscle group fitness. This creates potential dangers of injury other harm. The body will create some "cross training" benefit but the most efficient improvement is to undertake as near as possible the tasks in which we are striving to improve our ability. This is often by dissecting the task into smaller components which are key elements and can be repeated often. In the case of longer runs there is such structural damage to the body that we must undertake only preparation that can be "absorbed" within days. However, adjunct long walks and long swims, while not leg muscle specific group accurate for running, still cause countless other benefits which assist in running capacity. (Blood iron, liver glycogen, countless more.) Swimming, cycling, rowing, and skiing are all great cardio activities, hugely health giving if done carefully. They will have some benefit in a running program. Sprint running trains us to sprint. Long runs, to run long. Training always has a cross training effect, but, specific training is the first requirement for specific goals.

34 TAKE YOUR MORNING PULSE OCCASIONALLY AND BREATH RATE

Like your morning weight, your morning pulse is a barometer of your health, condition, current state. It may not always be a perfect indicator as it is varied by temperature, hydration, stresses, bowel content, and numerous other variables. Over time you can learn much by observing this simple single piece of data. Breath rate in bed is much the same, with the same considerations for error, and yet long term assistance.

35 1LB = 2 SEC P/MILE P/MIN, OR 1KG = 3 SEC P/KM, IF YOU ARE INTERESTED.

Speed, pace, times, are all competitive runner worries. Health is the first and most important goal. However, should you be a little interested, then the most significant factor in speed is certainly body weight. A fairly accurate "formula" is that each extra pound (454 grams, approx half kg) of body weight will reduce a runners pace by 2sec per mile (1.61km). Unless you are running under 40 mins for 10km it is not much of a benefit to know. While the formula is fairly accurate across all body weights, and distances up to at least 42km, your total health is at risk if inadequate diet is applied to merely lose weight in the ambition of lower running times.

36 GO TO BED, NOW! TEACH YOURSELF TO DO SO.

The internet, that book of faces, the TV, books, radios, CDs, DVD's, newspapers, magazines, puzzles, gaming, the guitar, countless distractions. GO TO BED. SLEEP. It will all be there tomorrow, and if WW3 starts ten minutes after you go to bed then you will never know it anyway. Go To Bed. Sleep. Your body probably can exist well but your brain needs to "defrag", it has toxins to remove, info to place, ideas to emerge. It will make you sorry you did not let it clear. The resultant lethargy of physical muscles is amazing.

37 PREPARATION IDEAS TO REDUCE LOSS OF EXERCISE DAYS.

You could sleep wearing your clean training gear, if you must arise and train in the darkness on cold, wet, windy winter mornings, so you won't say " it's too cold and wet" when the alarm sounds.

. You will step out of bed ready to "go" (perhaps wear a track suit or flannel PJ's over the training gear) Note, socks on too. Warm clothes in winter when starting a run are a sensible rule to follow as the cold is less daunting. Sleep with a wool beanie if you get night sniffles from room temperature drop. A warm head helps sinus warmth. Looks like the Asylum has left the gates open, but early morning coldness gets the sinuses snuffing if the head is cold. Comfort is the main game as we age, right? Do anything to make the idea desirable not detestable. When you step out on cold wet winter mornings wear a wool beanie, painters gloves, old trackie top, and anything else you need to be warm You can obtain a ready supply of "disposable" (or,- drive back and pick up from behind the fence) warm over-gear cheaply available at small church op-shops

38 KEEP RECORDS AND KNOW YOUR COURSES FOR SAFETY.

Though not attempting to race against your own times over your courses, it is of some benefit to have occasional observance of your times and distances for like courses and conditions. This can give some satisfaction in progress or some idea as to over training or minor health problem causing slowing.

A record of the actual "feel" and "mood" of some runes is of assistance when looking back, months, years. A natural slowing after 40 is understandable at a rate of 1 to 2% per year. However, consistent training over years would not see a 10% slow down usually unless there are some factors in play needing attention.

39 SUNBURN IS DANGEROUS

The knowledge has been out for a half of a century. Sunburn can kill, or maim at least. Do not become sunburnt when running. Use sunscreen or better yet hats with ear cover, long sleeves and collars. Best of all, run in the early morning or later evening in summer, it is cooler and more work is possible.

40 EVEN A 2 MINUTES RUN, OR ONE MINUTE, IS GREAT FOR YOU

There is much data now available on very brief HIT, high intensity training. In particular as a maintenance tool over as much as twelve weeks with as little as 3 x 1 minute runs per week! It is not suggested here that you should embark on this process now to simply cut your training time cost. The research has proven that cardio

maintenance is possible with such amazingly little output, that mitochondria are stimulated with ageing processes seemingly slowed, and lastly the body adapts to higher blood sugar levels without the insulin response. Thus pancreas stress is lessened and body weight is less likely to increase as excess sugar is burnt. The risks of strain and loss of endurance capacity must be considered and medical supervision may be wise.

41 MOVE YOUR LEGS BEFORE YOU STEP OUT OF THE HOUSE

Any movement of the legs prior to actually commencing running will be beneficial. A good first action could be merely lifting one knee whilst standing on the other leg, and holding a chair or table for balance. Gentle kicks, not high, and gentle partial squats are excellent blood circulators and pulse raisers. Lifting up one the balls of the feet by using the calves several times, gently, prepares them for work. Lying on the floor on your back and gently "cycling" in the air. Or alternatively, kicking the feet up to straight legs, then letting them fall back to the rear of the buttocks, will move blood into the joints and muscles. Light stretches are all helpful.

42 TIE YOUR LACES AND SHORTEN THEM TO AVOID TRIPPING.

Such a simple and seemingly stupid thing to write. Thousands of runners trip on their own laces each year as the laces are too long or coming undone. Tie them with well pulled knots and double tie them always.

43, WATCH THE SURFACES FOR SPRAINS AND TRIPPING HAZARDS.

The run on grass rule is always the best option, but with some care as to knowing what lies within or under the grass. Sprinkler heads, drain pits, wheel ruts, tree roots, and countless other dangers need to be considered and dealt with when the grass is short and these traps are clearly visible. Some footpaths have a shallow "spoon" drain at the edge, a superb ankle sprainer. (Springvale Road East Side near the Waverley Rd area, so cruel.) Tree roots are treacherous on sand tracks at Seaford and similar. Good light will help watchfulness.

44 BE GRATEFUL AND SAY THANKYOU TO SOMEBODY OFTEN.

Value, respect and show gratitude to people in your life. Your partner if you have one, or family, friends, work colleagues, people in shops or in the street. The more goodness you put out the better you will feel. Your health is improved by feelings of care for others, generosity, gratitude and respect for all people. Use your health to help others by example and encouragement. Give positive praise to all, it costs nothing.