



ZEN & THE ART OF SPRINTING
by Gregory Mitchell

Mind Development Courses

<http://www.mind-development.eu>

Foreword by Peter Shepherd

This course is on the periphery of Mind Development but nonetheless demonstrates the amazing changes in mental capacity, both in speed and clarity of mind that can be created by effective practical techniques, and illustrates how closely mind and body function in co-ordination. Using these techniques Gregory Mitchell was able to run 100 meters in a time that nearly matched the then British champion, with relatively little physical fitness preparation (60% or less compared with a typical athlete). You may not personally want to increase your sprinting speed, but the principles described here have many applications both for physical and mental development.

Cautions

Zen and the Art of Sprinting, by its nature, replace conventional athletic training; it may be described as complimentary. In my experience a 60/40 split produced the best results, and by a mixture of the two systems, it is possible to reduce the time required to reach a particular standard, by at least 20%, then to put in the extra hours a student's best performance by several percent. If Zen and the Art of Sprinting is used to replace conventional training, at the very least the gains will be small, and in the case of a student who is unfit there is the possibility of injury, and occasionally a blackout.

This system has been designed for sprinting, which may be defined as distances of between 60 meters and 400 meters. A student will run faster on the 800 meters, usually, by sprinting as fast as he can over the last 80 meters. There is no point in using this system for distances beyond 800 meters, because these longer distances are, for the most part, aerobic. This requires a different sort of training designed for middle and long distance running, or if using my methods this would require special equipment, such as a nitrogen tent. This piece of equipment is too bulky for a student to use on their own and dangerous unless used under trained supervision.

Introduction

The purpose of this course is to train the athlete to operate the body intuitively rather than consciously. The sprinter has a considerable reserve in speed that he cannot normally call upon. This is because he is too self-conscious of his striding. When a person operates part of the body consciously he controls this part of the body by perceptual feedback. In the normal person this mechanism is too tightly set so he checks himself more often than he needs. To give an example: when a person lifts something, he checks the muscles he is contracting by contracting the opposing muscles, and as a result he attempts to put down the object he is lifting at the same time as he attempts to lift it. Another example would be a thermostat in a heater that is too tightly set. A feedback mechanism which is too tightly set causes an oscillation, and so wastes a considerable amount of energy.

The basic principle of Zen is to un-tighten a person's feedback mechanism, or to put it more simply, to stop us putting our foot on the brake at the same time as we depress the accelerator, and thus allow us to operate our body with the intuitive part of the mind. Most of the exercises in this course are based on those used in Zen archery and karate but modified so as to apply to sprinting.

Theory

The ability to sprint is in part a mental ability and in part a physical ability. Athletes will of course increase their speed as a result of physical training but these increases will be not bet the maximum possible when conventional training and Zen methods are used in conjunction, in which case, the Zen techniques in this course are complimentary. For any really large increase in speed, concentration will have to be made on the mental aspect of sprinting to enable you to call on a measure of what is called hysterical strength, without having to run away from a mad bull. Exercises will have to be performed that will lessen the limiting conditions imposed by the nervous system and the mind.

The athlete has a considerable reserve he cannot call into use. My proof of this statement is as follows. A cadence rate of $6\frac{1}{2}$ strides per second is possible with Zen training as described in this Course. In practice, with a combination of Zen and conventional athletic training, a top sprinter on the 60 meters dash has reached a rate of $6\frac{1}{2}$ strides per second, whereas previously this sprinter had a

stride rate of just over five strides per second. Increasing your stride rate from 5 to 6½ will not make you 30% faster, because each stride will not carry you as far, but one dimension does not cancel the other, so a sprinter will be able to sprint 7 to 10% faster, the advantage going to the shorter sprinter - let us say 5 foot 6 inches - compensating for the fact that a short sprinter could be 3 to 5% slower than a tall sprinter with conventional training. With the Zen training, the short sprinter could sprint as much as 2% faster than a very tall sprinter. The reasons for this are as follows:

1. The maximum number of signals we may send from the conscious part of the mind through the spinal cord is of the order of 5 per second and these signals have to be shared by both legs. Furthermore the maximum rate a person can switch his attention either from one muscle group to another or from the left of the body to the right is about six to seven times per second, when operating the body with the conscious part of the mind.
2. A limit is imposed by the nerves that form the spinal cord - that is, to draw an analogy with electricity, the amperage these nerves will carry. In the normal person, if more than about a fifth of his muscles are in use at the same time the number of signals he can send to them per second will drop.

The pianist and the ballet dancer have in part overcome these problems. Their method of overcoming the limits set by the nervous system is to set up reflexes so that one conscious signal sent down the spinal column will initiate a sequence of events involving several muscular contractions.

For example the ballet dancer can perform a dance movement called the *echat dix*, in which she jumps in the air and crosses and uncrosses her legs ten times before landing. A typist is another example. A skilled typist has set up reflexes so one signal will trigger a chain of reflexes and type a whole word. A trained typist can type six signals per second from the conscious part of the mind and perform up to twenty-five muscular contractions per second, using the subconscious mind.

An athlete does in part do this already. He has unconsciously learned reflexes that allow him to contract muscles in groups. This means that the signals sent to a muscle group will initiate a complex chain of reflexes and the inter-relations between the muscles in that group will be managed at an unconscious level of the mind. One of the purposes of these exercises is to form a higher level of integration so that both legs will act as one muscle group, so that the number of strides per second is equal, in a one-to-one ratio, with the number of conscious signals sent down the spinal column.

Practical

Any system of training based on Zen starts with the body and then works itself up through the nervous system and then through the mind. The theory is that the mind and body should be treated as an integrated organism and that in training one should proceed from the physical to the mental, so the first stage is to handle the body's problems.

For a person's control of the body to be intuitive it is essential that he takes his attention off the body and allows his legs to be operated by the automatic unconscious part of the mind. To cite an example: a person in a state of fright - for example a person who is fleeing from something in panic - will often sprint faster than he could on an athletic track, because he has taken his attention off the body and is concentrating on making the fastest possible retreat from the threat. Dangerous scenarios, such as being chased by a hippo, in the form of hypnotically induced hallucinations, have increased the speed of a subject, who is a good sprinter by 10 to 11% over the distance of 50 yards, the speed hazing 30 miles per hour for the last 30 yards. This is a speed, however, that should not be sustained for more than 2 or 3 seconds. A 60 meter dash, with a top speed of 30 miles per hour, sustained to the end of the race is just possible

Exercise One

One of the primary means to introvert the sprinter's attention into the body is pain. Most of the pain in sprinting comes from the build-up of lactic acid and carbon dioxide. The following exercise will help him overcome this. This exercise is to be performed on a bed. The athlete should lie down until he is relaxed. When he has done this he should hold his breath, to start with for sixty heartbeats. In one session he should repeat this exercise about twenty or thirty times. Each day he should add about three heartbeats to the time for which he holds his breath. Some of the top karate experts can hold their breath for over one thousand heartbeats. A good sprinter can hold his breath for over three minutes and a person who can hold his breath for over three minutes is usually a good sprinter.

Exercise Two

This is another breath-holding exercise to increase the degree to which a student can draw on the oxygen in his blood and muscles to run faster and it is performed on the track. This exercise consists of running whilst holding the breath. To start with, the sprinter should hold his breath and start running at about half of his top speed, he should keep this up for about 20 seconds, and then jog for a couple of hundred yards to recover. Having recovered he should repeat the exercise over again. A session should consist of thirty repetitions of this exercise. Each session the sprinter should add a second or two to the time he can run without breathing. With a few months of practice he should be able to run a twenty-five to thirty second 200 meters without breathing, and 400 meters at about two-thirds of his full speed. He should not attempt to run 800 meters while holding his breath without supervision, due to the danger of blackout. In addition, if the athlete hyperventilates (breathes rapidly and deeply) twenty or thirty times before setting out on a breath-holding run, he will return even better times than the above. The effect of hyperventilation is to both remove carbon dioxide from the blood and increase the tolerance of the body to carbon dioxide and make the body more amenable to the following exercises. Exercises One and Two will on their own improve a sprinter's times by as much as two seconds on the 400 meters, and more over 800 meters.

The session is continued for however long it takes to do 20 repetitions of holding the breath for 30 seconds and jogging a couple hundred yards to recover. The session should be done 4 or 5 times a week for optimal gain, but less frequently will still produce improvement.

Exercise Three

This exercise is to overcome the previously mentioned limitation of the 'amperage' the nervous system can carry. For this exercise the athlete should attempt to put as many muscles as possible at the same time in an isometric contraction against each other. He should start by contracting all the leg muscles, continuing up the trunk and then the muscles of the arms, the face and the neck.

The effect of this exercise is to increase the strength of the nervous signal sent from the brain. One of the reasons why a person's strength increases from the use of isometric exercises is because a greater strength of signal is sent to the muscles from the brain, rather than an actual increase in muscular strength.

Strength-building exercises in karate are very similar to isometrics. A karate blow has such speed and power because of the power of the nervous signal to the muscle, which is equal to that of a person having an epileptic seizure causing the total discharge of the nervous system.

This daily exercise is done over about 30 seconds and after about 5 minutes may be repeated, and then again after five minutes.

Exercise Four

This exercise is similar to the previous, but instead of putting all the muscles into an isometric (static) contraction the athlete should attempt to keep as many of his muscles in motion at the same time and as rapidly as possible - but not tensed all over as in the last exercise, since to allow motion complementary muscle groups need to be tensed and relaxed accordingly. To prevent muscle strain the body should be kept loose and relaxed, wiggling around like a rag doll, and may be done lying or on a mattress. This exercise will have the advantage that it will force the athlete into very heavy oxygen debt, so it is suggested the athlete breathe as rapidly as possible if he wishes to prolong the time he can keep up the exercise. It will also improve lactic acid toleration and help to remove any surplus weight. This daily exercise is continued over about 30 seconds and then after about 2 minutes may be repeated, and then again after five minutes. I would recommend doing this exercise 10 times per exercise session.

Exercise Five

These exercises are called *chand* and *bahktri* exercises and are used in yoga. The athlete performs a muscular action he wishes to perfect in ultra-slow motion in front of a mirror. For a sprinter, he should go through the motions of two strides (including the arm motions) in front of the mirror in very slow motion. At the start, the sprinter will tend to perform the exercise in a series of jerks - the reason for this is a poorly set feedback mechanism. With further practice the athlete should be able to slow himself down to 30 seconds per pace and be able to perform the motion completely smoothly.

To the degree that the sprinter is performing this exercise jerkily he is wasting energy. This exercise will therefore cut the energy he wastes in sprinting and give him another ten percent of horsepower. This amounts to an increase of

approximately 1% speed over 100 meters. By setting up better habit patterns this exercise will also better integrate the felt body image (the mental image of body position) with the visual mental image of the body. This is what allows the kendo expert to aim a blow with his kendo sword at an opponent with his full power and to stop the blade within half an inch of his opponent. Kendo jousts among experts are fought with real swords and sometimes without armor, and these people hardly ever have an accident, far less even than in the English form of fencing with body and face protection. So this shows the potential this exercise has for controlling the body.

Exercises 1, 3, 4, and 5 would best be done in sequence, doing 3 repetitions of each before going on to the next. Add to these exercises the following 6, 7 and 8, to form a complete training session. Exercises 2 and 8-10 are done on the track in a separate training session.

Exercise Six

This is the first of the mental exercises. Once the athlete has become fairly good at Exercise Five he can perform this exercise. Again it is performed on the bed. The athlete should lay on his back and close his eyes. Once he has relaxed he should start by imagining himself at the beginning of a hundred meters race. For this visualization he should use as many types of mental imagery as he can - visual, auditory, image of body motion and position, etc. He should in fact stretch his imagination to the limit so his imagined picture of being in a race is nearly as real as the reality. In this way he should imagine himself running a hundred meters race in less than nine seconds. (The imagination is faster than reality, so a somewhat higher cadence rate can be visualized.)

NB: The athlete should not see himself winning against other competitors, because winning a race will cause the formation of an unconscious belief that he has already won the race. The effect of this is that an athlete will actually perform less well in a real race and probably not get first place.

Most important in this exercise is that he should make use of his improved body imagery and be aware of every stride in this imaginary race. There are about forty to fifty strides in a hundred meters sprint. With each repetition of this exercise the athlete should attempt to bring in more detail to his image picture, and increase the speed at which he goes through all the motions, until he can imagine all the body motions - arms, legs, trunk, lungs and head - inside a space

of just six seconds. This same exercise may also be performed for any other running distance.

This exercise achieves two things: the first is that through the process of auto-suggestion the athlete sets up better habit patterns; the second is that the frequency with which signals can be sent down the spinal cord is increased. The author, who is not athletically constructed, has by following these exercises covered one hundred meters in 10.2 seconds and achieved a top running speed of over thirty mph for a distance of 40 yards - this is because he became able to send $6\frac{1}{2}$ signals plus per second to his legs, for about three seconds.

Note: These experiments were done after completing the full Mind Development Program, which added another 5% to my top speed. Without the benefits of advanced Mind Development, 27 mph is not impossible over the shorter distances, such as the 60 meters and 100 meters, for a student who previously ran at a good performance level.

Exercise Seven

This is an exercise to acquire an intuitive control of the body. This requires the athlete to take his attention away from the body. In Zen, if a person wishes to turn something off he achieves this best by attempting to deliberately turn this 'something' on a little more. This is the basic principle of the following exercise.

For this exercise the athlete must try to be aware of as many parts of the body as he can at the same time. He should prepare a list of body parts and have a friend read this out to him. For example: "Be aware of your left foot; be aware of your right foot; be aware of your left leg; be aware of your right leg; be aware of your stomach; be aware of your chest; be aware of your left shoulder; be aware of your right shoulder; be aware of the inside of your right nostril; etc."

Make the list increasingly detailed. As each new body part is read out to the athlete he should put his attention on it without removing attention from those parts that have already been read out.

Exercise Eight

This is a meditation exercise to serve a complementary purpose to Exercise Seven. It is performed on the track. The athlete should place himself on the blocks in the starting position then he should form a vivid mental image. This picture must be a powerful, emotional image of something the sprinter would either wish to run rapidly toward, or away from. To do this will make the adrenal glands more active than normal, and the neurotransmitter in the brain called dopamine to be produced in higher than normal quantity. For example, running rapidly into battle or running away from a fire - this will depend on whether the athlete is predisposed to fight or flight. If the sprinter holds this image in his mind he will find he will take off from the blocks instinctively, and automatically in this state his running will be intuitive. I may draw an analogy with a Zen archer waiting to fire his arrow. His decision to fire must not be conscious but rather instinctive and intuitive. In this exercise the athlete should stop after twenty meters and repeat. With practice he should aim to cover this distance in about three seconds.

Exercise Nine

This is a concentration exercise to take the attention of the athlete off his body. This requires you to sprint a couple of hundred yards whilst concentrating on something several hundred yards in front of him, for example a house on the other side of the field. He should use his full power of attention in observing this house whilst at the same time he impels his body toward it with his maximum intention. An extension to this exercise that can be performed indoors is to put one's attention on some small object at about some 6-8 feet distance and examine its minutest details. A good object to use would be a book, at such distance that you can only just read the print. In Zen terms this is called 'clearing the vision.' To the degree a sprinter is concentrating and his vision is extraverted he will sprint faster.

Exercise Ten

This exercise is to make it possible for the sprinter to get more than one pace for every signal sent from the brain. To do this the sprinter has to associate a single syllable word with two paces, so every time he says this single word in his mind, it will act as a post-hypnotic command and elicit two paces. To build this association the sprinter should start running on the track at about fifteen mph

and should shout the single syllable word for every two paces. If he has been running at this speed for a couple of minutes the sprinter will be in a far better plastic and suggestible state than normal. The more often he performs this exercise the stronger the reflex will be.

A variation of the above exercise is to build a reflex for the effect that a mental image of a certain color is equal to a certain number of strides per second. It is suggested that the athlete use the colors of the spectrum. For example he could start with red as being equal to 3 strides per second, orange equals $3\frac{1}{2}$ strides per second, yellow equals 4 strides per second, green equals $4\frac{1}{2}$ strides per second, blue equals 5 strides per second, indigo equals $5\frac{1}{2}$ strides per second, violet equals 6 strides per second, then use pink to indicate $6\frac{1}{2}$ strides per second.

The Zen athlete may also build an association so that the intensity of the color is equal to the stride length (this is a variation of a technique used in singing to control the pitch and sound of a singer's voice). To build the associative reflexes required for this exercise demands that one can maintain a high frequency of strides per second for a fairly long time. The author has found that by running downhill with the wind behind him, or by running behind a large vehicle, it is possible to maintain 6 or even $6\frac{1}{2}$ paces per second for thirty or forty seconds or so, which helps to overcome this problem. Do this course honestly, you can increase your speed by as much as 10% - then, if you do the entire Mind Development Program, you could add another 3% to that.

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