

NOTES - FOR MAXIMUM KARATE FITNESS & WELLBEING

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Many students ask my opinion about Fitness matters. This is a leaflet about my thoughts and studies regarding the subject of Fitness.

These are my views and may or may not comply with orthodoxy or current thinking.

These suggestions are intended for Karate students or other athletes who wish to gain extra fitness.

It is entirely up to you personally if you wish to try any of the suggestions. Only try them entirely at your own risk under the supervision of a knowledgeable and competent instructor.

MOTIVATION

Without this you do nothing.

With it you can do anything.

To keep motivated the simplest way is simply to 'enjoy'. So don't make training a chore, penance or payback.

Make training fun. Find exercises that work for you!

Keep changing your routine as over time your body will adapt and then you will gain less benefit. Change your routine every 4 to six weeks.

Do what you enjoy and then work on making it more enjoyable.

Do not over-do it - if you ache you have overdone it. Step back the training routine so that your muscles feel like they have worked but are not overly stiff.

Forget 'the burn' 'no gain without pain' all these are negative and make training sound grim.

THE TRAINING PROCESS

1. Have a large glass of water and sip it slowly about 10 mins before you are ready to start your routine.

2. Meditate for 5 mins- visualise what you are going to do and just relax. See it in your minds eye as enjoyable. See yourself achieving your goal or making that stretch.

3. Warm up - gradually for 10mins

4. Stretch routine for 10 mins

5. Work out for 20 mins

6. Warm down for 10 mins

7. Meditate for 5 mins this time for relaxation only. Totally empty your mind and just breathe.

8. Sip another large glass of water slowly. Depending on the level of your workout and the amount you have sweat - if you feel like more water then have as much as you feel like.

When training do the easy exercises first.

Start gently and build up.

Worry less about weight - more about shape. Muscle is heavier than fat!

Don't be afraid to sweat - sweat cools you down and is a sign you are working hard enough. It also helps cleanse your body of toxins.

45 mins aerobic exercise is optimum, however if you are doing sets with a short rest and breaks for breathing exercises an hour is equivalent

Breathe out on exertion. Breathe in before exertion.

As part of your warm up do some lung expanding - breathing exercises.

If you start to become breathless stop and do some breathing exercises until you feel better.

Try to stay aerobic (with oxygen) you should be slightly breathless but able to talk or sing. For most people aerobic is the state to train in for most of the schedule it helps to burn fat, increase gradually your heart rate and involves little strain.

Anaerobic (without oxygen) is when you have exerted yourself so much that you have difficulty talking.

Anaerobic is not bad it's just different. It is good for some sports and activities that need quick energy bursts. Boxing, sprinting, ball sports etc.

A little anaerobic exercise should be included in your work out as it conditions the heart and lungs.

If you are a performance athlete you will need more of this type of training.

DIET & EXERCISE - Nutrition

Nutrition for sport is of vital importance. Athletes need to eat a nutritious diet plus take vitamins and minerals on a daily basis if they wish to achieve their goals.

Drink plenty of water 2 litres a day is a good level to aim for.

Try a big glass before training and a big glass after training and you're halfway there. A large glass at bedtime is also a good idea.

If your urine is a light straw colour your hydration is OK! If it is a dark colour you need more liquid - the darker the urine the more dehydrated you are. Water has no calories and for your body to heat it to body temperature it needs to burn heat calories therefore helping you lose fat.

As for affecting the amount of Fat you carry as a rough rule of thumb 60% is diet and 40% training.

A simple but effective method is eat a little less & exercise a little more. This will work over time.

However, a more effective method is 'what' you eat. Not necessarily the amount you eat. Processed foods with high fat and sugar are generally at least 4 times the calorific value of other natural foods.

Athletes need to eat plenty of good quality protein to help build muscle mass they also need to eat it at the right time.

Training creates hunger and it can be very easy for students to over eat the wrong things. Alcohol, smoking or drugs have no benefit in the diet of a professional athlete

They need fruit and vegetables for carbohydrate and should cut out refined fats, flour and sugar. Although fats such as olive oil, fish oils and flax seed oil are very important for maximum performance.

Nutrition is a vast subject and a question and answer session is a good way to start. As for affecting the amount of Fat you carry as a rough rule of thumb 60% is diet and 40% training.

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DRINKING WATER

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SEE ALSO HEALTH RECOMMENDATIONS LEAFLET!

GOALS

Establish goals and write them down. Allow a sensible and achievable time scale. As you achieve these goals - set new ones.

Do not make your goals too difficult, make them easy and reward yourself as you achieve each one. A training treat is a good idea a new bit of kit or a new outfit - as and when you achieve a new goal.

Think positively - remove negative thinking and negative terms of speech. Make 'can't' a taboo word.

WALKING

If you walk briskly, this is one of the finest aerobic exercises you can do. Walking is quite simply great exercise. Everyone should include brisk walking in their routine.

SKIPPING

Start with 1 mains skipping and don't give up if your technique is poor. You will quickly become proficient at skipping if you try.

5 mins skipping is quite tough and you should build up to this slowly. Counting the revolutions is a pretty good way to build up.
Start by trying to do 50 - then 50 without any stops or snags. Then 100 and so on.

BARE FEET

Try training in bare feet. But check that the floor is clean, warm and not too rough. Just do your warm up in bare feet and then build up to the whole session. This will help your energy system by stimulating the energy centers of your feet that affect your whole body. Martial Artists have understood this for hundreds of years.

Recent research suggests that small impacts to the joints can help build up cartilage and bone density.

REPS

This is the term for 'repetitions, the number of times you do a single exercise.
For instance 10 push ups is 'ten reps'

SETS

This is the number that represents a group of repetitions. For instance if you do 10 push-ups then rest - then repeat this twice more - you will have done 'three sets'.

WARM UPS & STRETCHING

Proper warm ups help avoid injury, increase cardio (heart) and vascular (lung) activity. They are a vital ingredient of any sporting activity. Many athletes tend to skimp a proper warm up or just don't know how to warm the body properly or don't know the proper sequence of activity. A good warm up should start at the top and work down. Finishing at the feet having warmed up the large muscles of the legs last.

The legs are very important for most activities and are the strongest muscles of the body. A good deal of attention should be paid to warming and stretching the tendons and muscles around the hips, (ball and socket joint) knees (hinge joint) and ankles. The power of the legs via the hips and abs (core strength) can then be applied to the arms and other parts of the body.

The warm up should be tailored to the particular activity and include all the relevant stretches. During warm-up emphasis should be placed on proper breathing techniques. This is often poorly understood. In the Martial Arts we use several different types of

breathing and all can be of use to various sports. Proper breathing can help athletes relax, work better and last longer.

There are three basic types of stretches: Passive, Ballistic, and P.N.F.

Passive stretching involves soft, slow, gentle exercises many of which have come from Yoga. Ballistic stretches are moving stretches and are fine for fast activity sports.

However, passive stretching should be done first. PNF stretching is for achieving extra mobility. Much deeper stretches can be achieved and it is by far the most effective short term stretching system.

All the above stretching exercises need to be taught in a proper synergetic combination, tailored to the particular activity, to achieve the required results.

All stretching exercises need to be taught properly to avoid injury and to prepare properly for the sport intended.

It is also very educational to have the major muscle groups identified, along with an explanation of how they work, to keep athletes well informed on how their bodies operate.

MUSCLES

To achieve power train your body from the inside outwards, Abs first, back next then arms then legs.

Muscles only contract and relax - they do not have a pushing effect. Muscles are generally in groups that work opposite to each other. Biceps v Triceps is a typical example of the upper arm.

To build bigger muscles you should do low reps 3 - 5 but heavy resistance so that the maximum you can complete is 3 to 5 reps. Rest and then do 2 more sets. So you complete 3 sets in total. Always do a half weight/resistance set to warm up.

To be strong but trim and lean you should do high rep but low resistance training. 50 to 100 reps. However, you should build up to these figures slowly. Starting with 5 or 10s rest and then two more sets. Gradually increasing the numbers over time as you become fitter and stronger.

ABDOMINAL TRAINING

Some of the best fitness and strength benefits come from abdominal training. In other words your mid section or trunk.

There are four major abdominal muscle areas to work out. Also your back muscles should be done in conjunction so as to avoid an imbalance. As well as your pelvic floor muscles - as you increase abdominal pressure your guts are pushing down on your anus. Thus to improve your pelvic floor muscles you should do at least 50 pelvic floor squeezes at each session. Do this by pulling up and in on your anus by using mental control.

Get your instructor to discuss and show you these properly.

1. Psoas. Large internal muscle has no visual effect but is important for strength and posture - especially your back. This is conditioned by doing sit-ups. However, it is important to do sit-ups properly. Legs bent, back flat down. Fingers on temples.
2. Frontal abs (Rectus abdominis). This is the six pack and can be conditioned in a variety of ways. It has a good visual effect. This area is worked by bringing your chest in towards your groin.

To condition front abs - Crunches, leg raises and hanging bar exercises are the most common. Sit-ups do also have an effect but are less efficient than the above.

3. Side abs (Transversus, internal & external obliques). This is the main muscle group to tuck-in your gut. It is placed either side of your frontal abs and works like a corset. You will get more 'looks' benefit from this one muscle than by all the others put together. It also helps provide abdominal pressure to help keep your back straight.
4. The final group is next to your elbows and works by pulling your shoulder towards your hip. However, working these will thicken your waist and this is often the last thing most people want from an abs routine.

Core strength is vital for athletes and a full session with regular training on core strength is probably the single most important aspect of any exercise routine.

ISOMETRICS & PLYOMETRICS

Isometrics is one of the most efficient methods for increasing muscle mass. The basic principle is to push or pull against an immovable force. This forces the muscle into an efficient contraction (70% of maximum). It is an amazingly effective muscle strengthener as proved in scientific tests.

The other great thing about Isometrics is the short duration of the routine compared to the effects. It also has great advantages to athletes in the fact that Isometrics can be demonstrated quickly and easily anywhere without equipment.

However, many safeguards and controls need to be included in a training regime to make this the effective process that it has the potential to be.

PLYOMETRICS

By using Plyometrics properly you can achieve a 40% increase in power. Put simply Plyometrics is creating a proper compression of the muscle so that it is at the optimum length to create the optimum contraction.

Many athletes either hold their muscles at too short a compression or more commonly too long a compression. This then stops maximum power contraction and is inefficient.

Muscles only contract and relax; they do not push as such. Pushing is created by muscles contracting.

Muscles also work smoothly together in antagonistic and protaganistic sets. Understanding this and using this knowledge to relax the opposite set can lead to greater efficiency, strength and more energy.

Under stress we sometimes use Plyometrics naturally but to bring it into competitive sports and understand how it works, this facility must be trained.

Effective demonstrations of this increase can be shown to the class or student. It is worth it for a 40% increase!!!

STRENGTHENING

To achieve power athletes need to train their body from the inside outwards, Abdominals first, back muscles next then arms then legs.

See the section on Core Strength and Isometrics

Nutrition is also very important and Protein provides the building blocks of muscle. Many athletes waste time on training because their nutrition is inadequate to build the required muscle prior or post the training session. (See the section on nutrition)

Muscles only contract and relax - they do not have a pushing effect. Muscles are generally in groups that work opposite to each other. Biceps v Triceps is a typical example of the upper arm.

To build bigger muscles you should do low Reps 3 - 5 but heavy resistance so that the maximum you can complete is 3 to 5 Reps. Rest and then do 2 more Sets (a Set is a repetition of the reps). So you complete 3 Sets in total. Always do a half weight/resistance set to warm up.

To be strong but trim and lean you should do high Rep but low resistance training (light weights or resistance).

For example: 50 to 100 reps. However, you should build up to these figures slowly. Starting with 5 or 10s rest and then two more sets. Gradually increasing the numbers over time as you become fitter and stronger.

Athletes can often be extremely strong on say a bench press or lifting weights, but have trouble applying the power in different sporting situations or unusual conditions. This is because of the way they train.

To achieve overall strength and power all the muscles need to be close-linked. In other words your body is like a chain it is only as strong as its weakest link. Special linking exercises need to be done to achieve overall strength. A strong abdomen will be of little use without an equally strong back. Legs and arms are only half power without good core strength etc.

VISION

Although athletes see perfectly well in terms of their eyes and their vision, they often do not develop this facility nor understand how their vision works in practical terms.

The outer vision.

Take peripheral vision, the eyes have a fairly well defined angle of sight. Athletes can use this to their advantage if they know how it works and what situations it can be helpful in. Tom has a range of demonstrations that can help students understand and improve this facility.

There are also a range of simple exercises to help improve vision, mobility and focus of the actual eye itself.

What can the eye itself tell us? Being able to read your opponent's eyes can be helpful in understanding their intentions. What does blinking tell us? Is blinking controllable?

In the Martial Arts we have a saying about falling leaves. If you concentrate on one leaf you do not see the beauty of the whole tree and the other leaves as they fall.

The inner vision

Perception and sight, perception is the stronger. It is not always what we actually see that is as important as what we perceive.

Perception is brain power that sometimes uses the eyes but can operate independently. This is the inner sight and is a very important facility for any athlete.

Perception, being brain powered can also incorporate visualization for possible outcomes. This inner sight can give athletes that extra edge in competition. By being aware of the field of play, the position of team members and the position of the opposition. It can update the overall scenario without actually 'seeing' the positions and is often the special gift of great athletes.

Nevertheless it can be trained and improved.

POSITIVE THINKING

Is the glass half empty or half full? In team sports the glass must always be half full. It is very important to change any negative thinkers into positive thinkers.

This can be done by counseling the athlete or team to understand the great power of positive thought.

Winners are not negative and the power of the mind in achieving success should not be underestimated. The entire athletic physical prowess in the world will not make a negative person into a winner.

Awareness is a fine attribute in an athlete in the Martial Arts we call this facility 'Zanshin'. As some of the positive thinking routines begin to take hold an athlete's awareness will naturally improve.

Positive thinking is something that needs to be incorporated into the athlete's whole life and not just the sporting element.

Negative thoughts and feelings have got to be totally eliminated. The coach needs to be aware of negative thought patterns and negative actions. Some work may need to be done on the athlete's emotional life and on their belief systems.

Some meditation and visualization techniques can help turn negativity around. Just like the physical warm-up athletes should do a mental warm-up. It is perhaps the most important thing they can do prior to competition.

The coach must also be very positive. Negative criticism has no place in a winning team. A coach needs to work on enthusiasm and constructive, positive help - not criticism.

S.P.A.D.

Speed, Power, Accuracy, Determination - the engine of success.

According to Newton's Law mass x velocity equals power. This is a very interesting equation as it is difficult for an athlete to change their mass (basically their weight). It can

be done over time as the athlete acquires muscle mass and extra weight but it cannot be increased easily in the short term.

The incorrect balance between fat and muscle may create more mass but if the balance is not in favor of muscle then the mass cannot be propelled efficiently - so it must be the correct balance of mass.

So short term, speed is the main area to work on to achieve power. You cannot change your mass quickly but you can change your speed quickly. By increasing your speed, you automatically increase your power.

Speed is difficult to attain without relaxation and sufficient muscle mass and correct body dynamics, but the correct techniques can help obtain the optimum efficiency with the existing muscle mass.

Speed is of little use in competitive sports if there is no accuracy. Accuracy is a brain-body combination and needs to be trained as such. Exercises that train judgment and exercises that are known as motor-skills and eye brain co-ordination are the way to increase accuracy.

Finally without determination (the will to win, the determination to continue) then speed or accuracy will be of little benefit.

Determination is a purely mental activity and perhaps the most important of the four elements. Yet how many athletes, although naturally determined, actually train this important facility.

The range of important lessons required for determination:

1. Comprehension (understanding what is required).
2. Values (these are what make people tick).
3. Visualization (the power of the mind to see ahead).
4. Will power (the very force of determination).

BODY DYNAMICS

Using the body correctly offers the maximum efficiency.

Correct use of joint angles and body alignment - allowing for best muscle flexation is a subject that is neglected in most sports training regimes.

I call this important subject 'Body Dynamics'.

It is all about angles (vectors) symmetry, alignment. It is almost geometry in action. How to use the hips, legs, core strength, Plyometrics and flexibility (gained through stretching)

etc. to a dynamic synergy. All the elements working together to create an end result that is greater than its constituent parts.

Understanding the type of joints and how the muscle works in relation to that joint and the skeletal structure. Knowing which are the most powerful muscle sets and how they can be fired efficiently is of primary importance.

To know weak areas is as important as knowing the strong areas. The heart can pump much more efficiently if it is not under undue strain. This helps the athlete to last longer and perform better. It increases the stamina via knowledge rather than by sheer physical effort.

In some instances, various stances and postures can be improved by up to 300% in terms of their forward power.

Students need to understand how their bodies produce the most power and efficiency. The best way to do this is not through some dry intellectual discussion or by reading an article but by actual demonstrations of the improvement with a partner.

There are a range of Body Dynamic positions that give a knowledgeable athlete a distinct advantage.

In the Martial Arts it can be the difference between life and death, so proper use of Body Dynamics is vital. All sports can benefit from this system and once understood it needs to be incorporated at every level of the student's progress.

Knowledge is power!

It is better to light a candle than to rage at the darkness.

First work on the mind - the rest will follow.