

## Personal Exercise Plan (P.E.P.)

*I am going to produce and carry out a personal exercise plan that will potentially improve my performance in my sport. My chosen sport is actually a combination of kickboxing and freestyle karate. I shall refer to it as martial arts. Martial arts requires many skill related fitness characteristics such as: agility, power, reaction time and balance, and also health related fitness characteristics such as: strength, speed, body composition, flexibility and both types of endurance (cardio-respiratory and muscular). These are all fitness characteristics; fitness is the ability to undertake everyday activities without undue fatigue. I shall concentrate on improving power, body composition, speed and flexibility.*

- *Power is the ability to exert maximum muscular contraction instantly in an explosive burst of movements. This is a combination of speed and strength. This applies to being able to execute attacks with maximum speed and strength for a more devastating blow. I scored 230 cm on the sergeant jump that is the highest in my group, which is good, and I can bench press the maximum available weight of 72 kg with ten reps, which is impressive, as I only weigh 70 kg.*
- *Flexibility is the ability to achieve an extended range of motion without being restricted by excess tissue. This applies to being able to execute different kicks with varied heights. Although I scored 45 cm on the sit and reach test rated excellent, I still feel it will improve any advantage I already have.*
- *Speed is the ability to put body parts into motion quickly. This applies to being able to not only attack fast, but too be able to dodge blows or move to soften the blow. My arms are fairly fast but there is no test for that so I will hope to improve the score of ... that I scored on the 30-metre sprint.*
- *Body composition is the state the body is in, in terms of the relative amounts body fat in comparison to lean body mass. This not only applies to aesthetic benefits, but generally a more mesomorphic somatotype gives better endurance for attacks.*

*Because it is hard to work on all of these per one session, I shall do four sessions concentrating on power and body composition and four sessions concentrating on speed and flexibility. In the sessions concentrating on power and body composition, I shall use apparatus such as; leg press, bench press, rowing machine, and use the elevated platform for doing sit ups. For the leg press I will do two lots of ten reps of one hundred kilograms, for the bench press I will do five lots of ten reps of forty kilograms, for the rowing machine I will do two lots of three hundred metres, and for the sit ups I will do five lots of twenty sit ups. In the sessions concentrating on speed and flexibility, I shall use apparatus such as; bench press, rowing machine and spend ten minutes alone on stretching. For the bench press I will do five lots of ten reps on eight kilograms, for the rowing machine I will do four lots of fifty metre sprints and for the stretching, I will do it continuous with varied types for ten minutes.*

*The leg press involves the joints hip and knee, the muscles for the hip are gluteus maximus, hamstrings and iliopsoas, and the muscles for the knee are quadriceps and hamstrings. The bench press involves the joints elbow and shoulder, the muscles for the elbow are biceps brachii and triceps brachii, and the muscles for the shoulder (for flexion & extension) are posterior and anterior deltoids, latissimus dorsi and pectoralis major. The elevated apparatus for the sit-ups involves the torso, the muscles used in this region are rectus abdominus and external obliques. But the rowing machine involves pretty much every joint in the anatomy, so must use pretty much every muscle in the anatomy. Because of these combinations, I can meet the demands of using most muscles in martial arts.*

*All of the above amounts and times will change due to characteristics of training. The characteristics are; specificity, progression, overload, reversibility and tedium. Specificity is to train the muscles that are used in the activity, this is done, as martial arts uses all muscles and the apparatus' used will cover all necessary muscle groups. Progression is that the body will adapt to the intensity of the load being placed on it, this will be done as I am going to change the session outline depending on its level of ease. Overload means that training should be at a level of some discomfort, this would also be done as I change the session outline to become more difficult. Reversibility refers to when you do not use the trained muscles then they become more adapted to everyday life (atrophy), this should not affect me P.E.P. as the two different training sessions are going to be alternate. Tedium involves making the sessions interesting, so that I will be motivated to put more effort into it, therefore beneficial.*

*There will also be many safety implications due to using machinery and the way the body works. For instance, when we are about to train it is important to remember that we must first warm up –this increases the heart rate causing the capillaries to dilate due to the release of adrenaline which in turn leads to an increased speed of oxygen delivery, it will also lead to an increase of muscle temperature which increases the metabolism and facilitates enzyme activity thus ensuring a readily available supply of energy, the increase in muscle temperature also leads to a decrease of viscosity (thickness) within the muscle leading to greater elasticity and extensibility of the muscle fibres therefore increasing speed and power of contractions, the warm up also leads to an increase in speed of nerve impulses making us more alert and finally, joint movement becomes more efficient through the increase of synovial fluid. The first stage of warming up is to increase heart rate therefore increasing body temperature and speed of oxygen delivery, this can be as simple as skipping or jogging, the second stage involves stretching exercises, the three types are; static e.g. against a wall, active e.g. movement from touching toes and dynamic e.g. using appropriate muscle groups relative to a skill associated with your sport, the third and final stage for warming up involves the rehearsing of a movement e.g. practicing racket strokes.*

*And secondly – cool down, this is after the training session, it is to prevent any unnecessary discomfort, it involves light exercise to keep the heart rate slightly elevated to keep metabolic action high and capillaries dilated, therefore enabling oxygen to move through muscle tissue to oxidise and remove the built up lactic acid, then stretching again whilst the muscles are still warm , it also allows time to recover from oxygen debt. The warm up and cool down can just be very simple, as I will be spending five minutes before and after each session doing simple activities such as; jogging lightly on the spot, stretching the torso, arms and legs. Another safety issue reverts back to the machinery, because most of it is complex then I will need to ensure that I know how to use and prepare correctly, and also do a little preliminary test before the first session to find out how much I can move/reps I can do. Because of my training I am already to a certain extent should be slightly above average, but do occasionally suffer with my left knee as it is an old injury and sometimes starts to erect pain especially in running or similar activities.*

### **PRE – P.E.P. TEST**

<b><u>TEST</u></b>	<b><u>SCORE</u></b>
<b>Max v02</b>	<b>41</b>
<b>Bleep test</b>	<b>8 : 6</b>
<b>Sit up bleep test</b>	<b>6 : 5</b>
<b>Grip strength</b>	<b>Left: 49      Right: 59</b>
<b>30 metre sprint</b>	
<b>Sit and reach</b>	<b>45 cm</b>
<b>Standing long jump</b>	<b>230cm</b>
<b>Trunk rotation</b>	<b>Left: 14      Right: 11</b>
<b>Sergeant jump</b>	<b>45 cm</b>

