

The Daily Exercise Plan

by

Dr Greg Wilson, PhD

INTRODUCTION

This is the fourth article in our Fit for wealth lifestyle series and the completion of the core elements of the program i.e. diet and exercise. In our previous article we developed a detailed food plan individually designed to gradually move us to our optimal body weight. In this article we will develop our daily exercise plan. Basically the aim is to undertake moderate to intense exercise for about 1 hour every day. Each day the exercise will vary from cardio-fitness exercises like running and cycling, to strength training exercise with weights and finally to recreational activities like hiking and swimming. Importantly we are going to do some type of moderate intensity exercise each and every day and this will become a normal and natural part of everyday life.

As previously outlined, weight loss is about 90% diet and only 10% exercise. Hence exercise forms an important, but minor part of the weight loss equation. However, regular exercise is very important for the health and wellness of the body and mind. Regular exercise will enhance the strength and function of the body improving its capacity and energy levels. It will also aid immune function, helping to prevent illness and disease, and have a positive effect on mood and mental function. People who regularly exercise are healthier, live longer and enjoy a higher quality of life than inactive individuals.

THE OVERALL EXERCISE PLAN

My recommendation is to perform a 3 day activity program whereby on:

- day 1 cardio-fitness type exercise is performed,
- day 2 strength training exercise is performed
- day 3 recreational activity is performed

This program is then repeated every 3 days so that some form of moderate to intense exercise is performed every day. The plan is to build up to performing 1-2 hours of exercise each and every day. However, as many people reading through this article will have initially poor levels of fitness, it is recommended to start with only 20 to 30 minutes each day and gradually built up over time by adding an extra 5 minutes of exercise every 2 weeks until the 1-2 hour level is safely achieved.

GETTING STARTED

Prior to commencing the exercise program it is important to undertake a full medical check to ensure there are no potential problems from participation in such a program. It is also recommended to employ a competent and qualified personal trainer to help get started with the exercise routine so that all the different exercises can be safely and correctly performed.

Each person's body is different and many people will have injuries to their lower back, knee joints or shoulders. The exercise program needs to be tailored to these individual factors. For example, I find that now I am in my late 40's that if I run outside on the road that my knees are very sore. Hence now it is better for me to use an elliptical cross trainer to perform my running activity. Some people will find that cycling is a good exercise, while others will find it problematic for their knees. Rowing is a great overall fitness exercise, but not if you have a sore back. Hence it is important to have a thorough medical examination and employ a well qualified personal trainer so that an exercise program which suits your individual characteristics can be undertaken. Therefore, in this paper I will outline the general overview of the exercise program, which then needs to be specifically tailored by your medical doctor and personal trainer.

Prior to any exercise it is important to perform a warm up activity to prepare the body for the increased activity levels. This is generally achieved by some light cardio-fitness type exercise such as brisk walking or slow jogging and some gentle dynamic stretching such as arm circles, leg lifts and gentle actions of the torso.

DAY 1: CARDIO-FITNESS AND STRETCHING

I recommend that you perform this exercise session in a well equipped fitness training centre which has internationally standard fitness equipment such as bikes, treadmills, elliptical cross trainers, rowing machines etc. These devices should be equipped with accurate heart rate monitors as well as providing accurate information on the calories expended, speed and distances achieved from each session. We will need this information to ensure you have a safe and effective training session and also to chart your progress over time. This is preferred over outdoor exercise, such as walking in the local park, so that the exercise session can be well controlled and exercise output easily quantified.

Maximal heart rate is generally estimated as $220 - \text{Age}$. Hence as I am 48 years of age my estimated maximum heart rate is $220 - 48 = 172$ beats per minute (bpm). The American College of Sports Medicine defines moderate intensity exercise as that which invokes a heart rate of between 64 to 76% of maximum. When commencing our cardio-fitness training program it is recommended that the heart rate value be maintained within the moderate range. To achieve this it is essential that exercise machines are used which have reliable heart rate recording devices, or alternatively that a heart rate monitor is worn during the training sessions. Table 1 outlines the moderate intensity heart rate values for people between 30 to 70 years of age.

Recommended cardio-fitness exercises include brisk walking, jogging, cycling, rowing, step ups, running on an elliptical cross-training device, group exercise classes etc. Depending on initial fitness levels, commence with about 20 minutes of continuous activity and gradually build up until 60 minutes of continuous activity can be achieved. The periods of exercise can be performed using different exercises. For example, 10 minutes of brisk walking, followed by 10 minutes of cycling and then 10 minutes on the rowing machine to make up 30 minutes of continuous exercise. Adjust the exercise speed and intensity so that a moderate heart rate value can be maintained throughout the exercise. I recommend maintaining a reasonably constant speed during the exercise and avoid oscillating between high and low intensity (i.e. sprinting and walking). This has become popular, but it is stressful for the cardiovascular system and will result in heart rate values that exceed the upper limit.

Table 1: Moderate intensity heart rate, lower and upper values, for people of differing ages.

Age	Estimated Max heart rate (bpm)	Lower range heart rate value (64% max) (bpm)	Upper range heart rate value (76% max) (bpm)
30	190	122	144
31	189	121	144
32	188	120	143
33	187	120	142
34	186	119	141
35	185	118	141
36	184	118	140
37	183	117	139
38	182	116	138
39	181	116	138
40	180	115	137
41	179	115	136
42	178	114	135
43	177	113	135
44	176	113	134
45	175	112	133
46	174	111	132
47	173	111	131
48	172	110	131
49	171	109	130
50	170	109	129
51	169	108	128
52	168	108	128
53	167	107	127
54	166	106	126
55	165	106	125
56	164	105	125
57	163	104	124
58	162	104	123
59	161	103	122
60	160	102	122
61	159	102	121
62	158	101	120
63	157	100	119
64	156	100	119
65	155	99	118
66	154	99	117
67	153	98	116
68	152	97	116
69	151	97	115
70	150	96	114

Gradually increase the exercise duration by about 5 minutes every 2 weeks provided that the exercise can be achieved without excessive stress and the heart rate can be maintained within the moderate intensity range (i.e. 64 to 76% maximum). Record the time, distance and average heart rate achieved on each fitness machine and use this information to chart progress over time.

Flexibility training

After completion of the cardio-fitness training session we will do a flexibility training session. During the warm up you would have performed some gentle dynamic type of stretches. However, after each cardio-fitness session we will stretch for about 20 minutes, making sure we stretch each and every major muscle group. Each stretch should be performed to the point of mild discomfort and held for about 20 seconds in duration. Your personal trainer will be able to show you the appropriate stretches to do and make any individual changes that are required to the selected exercises, depending on your specific characteristics. For example, the popular sit and reach stretch, where the head is brought down towards the knee, should be performed with caution or avoided altogether if one has a lower back problem.

As we age we tend to lose our flexibility and mobility and hence it is important to include regular stretching as part of our weekly program. Some stretching will be performed as part of the warm up session each day. However, a more extensive flexibility training session should be conducted every 3 days, after the cardio-fitness session. This is the perfect time for the flexibility training as the muscles will be warm and the mind should be relaxed with the release of endorphins from the cardio-fitness training. Both of these factors will work in your favour to enhance the flexibility of the body during this stretching session.

Table 2: Cardio-fitness training program.

Exercise	Specifications	Duration
Warm up	Brisk walking and dynamic stretching	5 to 10 minutes
Cardio-fitness exercise (Jogging, Cycling, Rowing, Step ups, Elliptical running on cross-trainer machine, group exercise etc)	Maintain a relatively constant speed throughout the session with a heart rate value between 64-76% of maximum	20 minutes progressively building up to 60 minutes of continuous exercise in 5 minute increments every 2 weeks
Stretching (whole body)	Hold stretches for 20 to 30 s at point of mild discomfort	20 minutes
Total		45 to 90 minutes

DAY 2 – STRENGTH TRAINING

The cardio-fitness and stretching training session is targeted to enhance the function and capacity of the cardiovascular system, and improve the flexibility and mobility of the body. It will also serve to increase the energy expended, which will assist in weight loss. The strength training is performed to enhance the strength and function of your muscles and bones. I recommend performing between 8 to 12 strength exercises each session that cover the entire body. The body responds to change so it is important to vary the exercises frequently to continually stimulate the body to adapt and achieved further improvement. Table 3 lists some suggested exercises. Variation in exercises are included in the program and this is to promote continuous change in the training performed. I prefer to include many bodyweight and free weight exercises such as lunges, chin ups, dips, pushups and bench press. However, I realise many people just starting out in strength training may not be able to perform such exercises and need to start with more simple isolated machine weight exercises and gradually build up to the free weight and body weight exercises over time. Hence it is essential to consult a competent personal trainer when starting out your strength training to individualise your program, based on your fitness level, and any injuries you may have.

For beginners I recommend that 8 to 12 repetitions for 1 set be completed initially. As strength and fitness levels improve, progressively increase the number of sets to 2 and then 3 or 4 sets for each exercise. Between each repeated set have 1-2 minutes rest. Initially focus on ensuring the correct technique and breathing patterns are consistently used. If more than 12 repetitions can be easily completed for an exercise increase the weight. If less than 8 repetitions can be correctly completed then lower the weight. Record the loads that can be achieved on each exercise so that your progress can be charted over time.

Table 3: Strength training program.

Exercise	Specifications	Duration
Warm up	Brisk walking and dynamic stretching	5 to 10 minutes
Muscle Group and suggested Strength Training Exercises: 1. Chest (bench press, dips or push up) 2. Shoulder (overhead press, lateral raises or upright row) 3. Upper back (chin ups or lat pulldown) 4. Middle back (seated cable row or DB row) 5. Lower back (back extension or back hover) 6. Legs (DB squat, lunges or leg press) 7. Legs (leg extension or leg curl) 8. Stomach (leg raises or sit up) 9. Stomach (abdominal hover or crunches) 10. Arms (bicep curl or DB arm curl) 11. Arms (tricep extension or tricep pushdown)	8 to 12 repetitions for 1 to 4 sets with 1-2 minutes rest between sets and exercises. If more than 12 repetitions can be easily completed then increase the weight. If less than 8 repetitions can be correctly completed then lower the weight.	25 to 90 minutes
Total		30 to 100 minutes

DAY 3 – RECREATIONAL ACTIVITY

The main purpose of the recreational activities are to allow the mind and body to relax and enjoy the natural surroundings during the recreational activities. The goal is to perform these activities for about 1 hour every 3 days. In the first article in this series I outlined some of my favourite recreational activities which include swimming and bike riding. Other activities may include playing golf or tennis, hiking in a nature park, walking down the beach, canoeing across a river etc. These activities should be pursued at a leisurely pace and are basically a recovery day for both the mind and the body, from the cardio-fitness and strength training performed on days 1 and 2 of the program. The recreational activities chosen will depend upon availability of the facilities, personal preferences and weather, and I recommend that you regularly change the activity.

Basically the exercise program is designed to keep you physically active for about 1 hour each and every day. Eventually this becomes a normal, healthy and natural part of everyday life. The human body is designed to move and exercise. It is not supposed to be sitting in front of a small computer or TV screen for long periods of time each and every day. It does not function well without regular physical activity and hence this should be provided each and every day.

SIMPLE EXERCISE TIPS

1. Try and arrange an exercise partner or group to regularly perform the exercises together. This will make the training sessions more enjoyable and also help to sustain motivation to continue in the program. Joining together with family members, work colleagues and close friends is encouraged. Rather than catch up for coffee and cake or beer and chips, arrange your social interactions around exercise activities.
2. 30 minutes prior to training, drink a strong cup of coffee as the caffeine will help to stimulate the central nervous system and also allow you to burn more fat during the cardio-fitness training sessions.
3. Plan the exercise session as an important part of your day and don't find excuses to avoid the sessions. For busy people training first thing in the morning is recommended as it prevents you missing sessions through over-extended meetings and work and social commitments that tend to pop up later in the day.
4. Do not use exercise as an excuse to eat more food. The exercise sessions are designed to improve your health and well-being. They will have only a small effect on the total energy expended for the day. Hence train hard but also strictly stick to the food plan that was developed in our previous article.
5. Take a long term view to your exercise and diet routine. It will likely take several years until a truly healthy, fit and happy lifestyle is well developed and providing the type of results you desire. It should be viewed like a long term investment. Expect solid returns to pay off 3 to 5 years down the track. The important factor initially is to stick to the program and make it work for you in the long run.
6. Pay close attention to your body and modify your fitness program in accordance with your individual responses. If after swimming your shoulder hurts the next day then it may be better to change the stroke or try cycling. Your medical doctor and personal trainer can provide useful advice, but ultimately you must be aware of the feedback your body is giving you.

7. Set realistic goals for your fitness program. Would you like to be able to perform the local 10 km fun run in 1 hour, or perform 5 full chin ups, 20 push ups or bench press 100 kg? Set these goals with your personal trainer and work together towards achieving them. Motivation for training will be much easier if you are moving towards a clearly defined fitness goal.
8. During the exercise session realise that for the rest of the day it is likely that you will be stuck sitting in front of a computer screen or TV, sitting down listening to people at meetings, sitting in a car stuck in traffic or lying in bed sleeping. For this 1-2 hour exercise period it is your chance to enjoy the experience of being physically active. It is a good feeling, enjoy.