Fitness Frontline of health care

The Complete Fitness Workout

Complete Fitness Workout

I've been exercising in fitness centres for donkey's years, running outside or using a Versaclimber inside and doing weights in the gym.

In 1994 I moved from Adelaide to Canberra where I started to run fitness classes for 'regular folks' and hit upon the idea of the Complete Fitness Workout – a training mix of aerobic fitness, strength and flexibility exercise.

In my previous life it was the flexibility part that was missing. A serious bout of back pain re-adjusted my thinking.

I no longer run fitness classes but go to the gym regularly where I do the Complete Fitness Workout strength and flexibility training program, leaving the aerobic fitness part to intervals on a local oval – with my constant companion Honey, the wonder spoodle.

It is now one of my vaulting ambitions to introduce the Complete Fitness Workout to fitness centres around the world. It is an ideal program for people working on their own, people working with a partner and people in a class.

By taking part in this program on a regular and systematic basis you will reap the health benefits of

- an efficient aerobic system – a key driver of metabolic health
- enhanced muscle strength and bulk
- increased flexibility and joint mobility and
- a healthier outlook on life.

John Miller

The Complete Fitness Workout

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Honey, running dog.

A year from now you'll wish you had started today.
Karen Lamb

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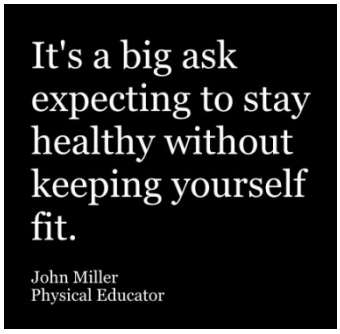


Complete Fitness Workout

It's called the **Complete Fitness Workout** because it's a program that encourages people to adopt a regular and systematic fitness training program that improves in the one workout,

- **aerobic fitness**
- **strength** and
- **flexibility**,

the three key elements of fitness which you need to work on if you're going to improve your all-round health, fitness and wellbeing.

The Complete Fitness Workout is an hour and 15 minutes group fitness training system for 20 or more people of all ages, shapes, sizes and levels of fitness which involves

- 5-minute warmup
- 25 minutes continuous aerobic activity at a pulse rate of at least 70% of your maximum, either running outside or using a treadmill, stepper, bike, rower, elliptical or climber inside.
- 25 minutes of systematic strength exercises using free weights or pin-loaded strength training equipment
- 15 minutes of flexibility exercises.

It's an ideal group program for 'regular folks' who have never taken part in a fitness program.

The ideal set-up for a class of 20 or more people in a room containing a variety of strength training equipment in a circuit format around the room and also aerobic equipment, treadmills, bikes, rowers and steppers.

After a warmup, the class is divided into 2, half doing the circuit, the other half working out on the aerobic machines.

After 25 minutes the groups swap over.

At the end of the second 25 minutes the class comes together on the floor to 15 minutes of flexibility exercises.

The Complete Fitness Workout is also a good system for people who want to work out on their own in a fitness centre.

> Success is the sum of small efforts - repeated day in and day out.
> Robert Collier

1.

In a predominantly sedentary society, physical fitness is a fundamental requirement for the development and maintenance of good health.

Aerobic fitness is one of the key mechanisms for stimulating the development and maintenance of good metabolic health.

It can be prescribed in a scientific dosage based on a formula that includes

- frequency
- duration and
- intensity,

and calculated, measured and monitored using electronic, wearable technology.

Maintaining good musculo-skeletal health involves a regular and systematic strength and flexibility training program.

Strength can be improved either by exercises that include
lifting
one's own bodyweight

- free weights or
- weights incorporated in a machine

… to a prescribed dosage of weight, repetitions and sets.

Good mental health is intimately connected with good metabolic health and hence to aerobic fitness and high quality 'fuel'.

Take care of your body. It's the only place you have to live.
Jim Rohn

2.

Metabolic health is driven by **aerobic fitness** and **diet**. Hippocrates said, '*If we could give every individual the right amount of nourishment and exercise, not too little and not too much, we would have found the safest way to health.*'

We're in an era when there is an epidemic of metabolic dysfunction. It's recognised by its symptoms.

- cardiac insufficiency
- breathlessness
- obesity
- high blood pressure
- depression
- type 2 diabetes
- elevated blood fats
- insomnia
- snoring
- sleep apnoea
- headaches
- tired
- lacking energy
- low libido
- irritable bowel …

We're not talking about a disease; we're talking about personally-generated body system dysfunctions.

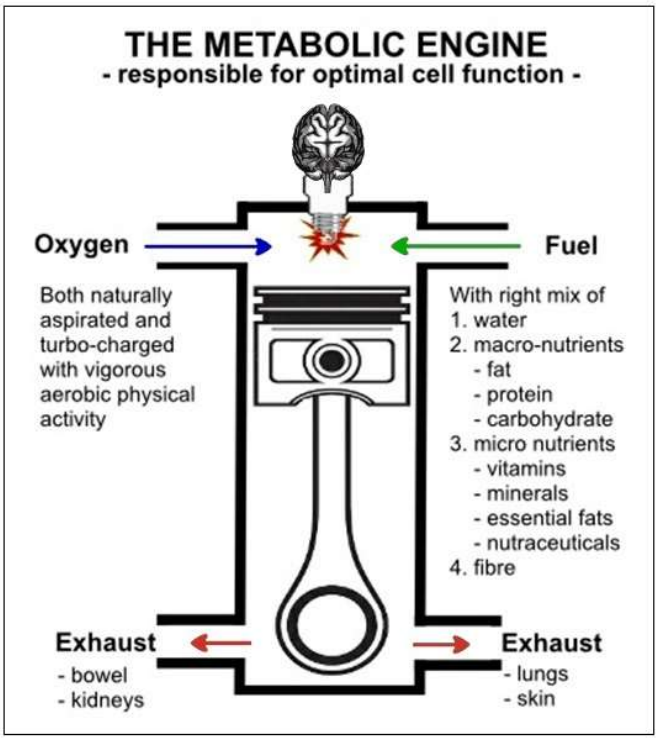
And being personally generated there's a good chance they can be personally ungenerated.

The cause? a **metabolic health engine** that's

a. not delivering enough oxygen to every cell in the body

b. not delivering the right amount of high-quality fuel to every cell in the body,

c. coupled with an inefficient 'exhaust system', one that fails to successfully remove the waste products of cellular metabolism.



You, the individual, can do more for your own health and well-being than any doctor, any hospital, any drug, any exotic medical advice.
Julius Richmond, US Surgeon General 1979

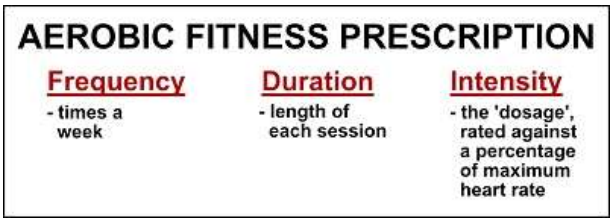
3.

THE SOLUTION

For too long the body system dysfunctions generated by a lack of aerobic fitness have been papered over. The medical industry in particular has been blind-sided by the influence of the pharmaceutical industry. Not including the aerobic fitness arrow in the medical quiver has been a long standing oversight.

A good aerobic fitness training prescription includes a 'dosage' involving and equation based on frequency (times a week), duration (length of each session) and intensity of **effort** (based on heart rate).

You can't swallow an aerobic fitness prescription!



If you're serious about becoming aerobically fitter, merely recording time, steps or distance is pointless unless effort is also taken into account.

(The American College of Sports Medicine's recommendation of 30 minutes of moderate intensity aerobic physical activity on five days per week, or a minimum of 20 minutes of vigorous intensity aerobic activity on three days per week is an inadequate prescription because it doesn't define 'moderate' or vigorous. It's like prescribing a blood pressure tablet of 'moderate' active ingredient.)

For the first time, medical and fitness and applied health practitioners can prescribe, measure, manage and monitor the amount of aerobic fitness activity their clients are doing each week.

Your level of aerobic fitness is a good indicator of the condition of the system responsible for transporting oxygen to working muscles: - the heart, lungs and blood vessels. However, to restrict the importance of aerobic fitness to the cardiovascular system does it a grave injustice. On the contrary, your level of aerobic fitness is perhaps the best indicator of the health status of most of the important body systems.

Only 10 to 15 percent of people over the age of 30 years participate in sufficiently vigorous activity (of the huff and puff variety) each week to maintain reasonable level and reap the benefits of aerobic fitness.

According to the research, the stimulus to improving aerobic fitness is at least three vigorous aerobic sessions a week of at least 20 minutes a session. And if 20 minutes is good, 30 minutes is better and 40 minutes is best.

Along with time, the intensity of your aerobic exercise needs to be taken into account. They say that you need to get your heart rate to at least 65% of your maximum heart rate (MHR) to gain an aerobic training effect. 75% is probably more like it. 85% is achievable and sustainable for people in good aerobic condition and is something worth aiming at. Maximum heart rate is said to be 220 minus your age.

The people I see who are in the best of health are those who have a vigorous aerobic training program, for 40 minutes on at least for days of the week. I see little evidence that ambling around the block for 10 minutes does much for the cardiovascular or any other system, or that it has much of an impact on lowering stress levels.

Your level of aerobic fitness is the symptom of the efficient function of all the major body systems which are dedicated to maintaining healthy cellular function, including the respiratory, cardio-vascular, muscular, digestive and the systems involved in elimination.

Aerobic fitness exercise is the body's 'turbo-charging' mechanism designed to make sure that all the trillions of cells in your body are getting the oxygen they need to work efficiently. It is the mechanism for boosting the various elimination systems, including the lymphatic system, the blood, liver, kidneys, bowel, skin and lungs.

The better the cells work the healthier you are.

It trivializes the concept of aerobic fitness to ascribe as its main benefit your ability to do more vigorous, muscular, physical activity for longer periods of time. Sure, that's what happens, but it is a byproduct, a symptom of the fact that a range of body systems are working more efficiently, not just your muscles.

We all know that the mind is just another body system and that it is connected to all other body systems; e.g., there is body system dysfunction (headaches, sore shoulders, high blood pressure, crook guts …) when we get anxious. This is known as the psychosomatic effect. What is less well known is the somato-psychic effect, where once the body is stimulated into action through an aerobic exercise program there is an impact on the mind – you feel better. An aerobic fitness training program has great benefit in keeping your mind in good shape. In other words, if you want to make the journey from feeling terrible to feeling absolutely fantastic, you'd be a mug if you didn't include some aerobic training in your lifestyle management program.

What is important is that a decline in aerobic fitness is one of the first of the warning signs that general body system function is being compromised. An elevation in blood pressure may not occur for years and then the systems may be so far 'gone' that the situation is irretrievable. You've got permanent body system dysfunction and you're destined to be on one or more of the junk pharmaceuticals for the rest of your life.

Having said all that, it's usually the case that when we talk about aerobic fitness we start talking about our ability do things that require physical effort – whether it's walking to the end of the street, walking up a couple of flights of stairs, going on a hike, playing a game of tennis… Wouldn't it be awful to restrict your choices in life because you hadn't bothered to keep yourself fit enough to do them?

However, whatever your level of fitness you can get fitter. Age is not an excuse. The older you are the longer you've had to train!

If you're wobbly on the pins, take to the stepper, the bike, the climber, the elliptical or the pool.

You'll feel better, you'll be able to do more and do it for longer.

> If you ever lack the motivation to train then think what happens to your mind & body when you don't.
> Shifu Yan Lei

4.

In a report published in the British Journal of Sports Medicine, researchers at the University of South Australia are calling for exercise to be a mainstay approach for managing depression as a new study shows that physical activity is 1.5 times more effective than counselling or the leading medications.

'People with the lowest combined aerobic and muscular fitness had 98% higher odds of depression, 60% higher odds of anxiety, and 81% higher odds of having either one of the common mental health disorders, compared to those with high levels of overall fitness.'
The research underscores the need for physical activity, particularly structured exercise interventions, to be a mainstay approach for managing depression and anxiety.' Ref: https://bjsm.bmj.com/content/57/18/1203

Published in the British Journal of Sports Medicine, the review is the most comprehensive to date, encompassing 97 reviews, 1039 trials and 128,119 participants. It shows that physical activity is extremely beneficial for improving symptoms of depression, anxiety, and distress.

The review showed that exercise interventions that were 12 weeks or shorter were the most effective at reducing mental health symptoms, highlighting the speed at which physical activity can make a change.

The largest benefits were seen among people with depression, pregnant and postpartum women, healthy individuals, and people diagnosed with HIV or kidney disease.

Lead UniSA researcher, Dr Ben Singh, says, *'Physical activity must be prioritised to better manage the growing cases of mental health conditions. Physical activity is known to help improve mental health. Yet despite the evidence, it has not been widely adopted as a first-choice treatment.'*

Higher intensity exercise had greater improvements for depression and anxiety, while longer durations had smaller effects when compared to short and mid-duration bursts.

Healing Without Freud or Prozac

In the book '*Healing without Freud or Prozac'* psychiatrist, (the late) David Servan-Schreiber outlines the case for aerobic exercise. He reports a study from researchers at Duke University who compared the anti-depressant effects of jogging with those of Zoloft.

> *'After four months patients treated with either approach were doing well. On the other hand, a year later, there was a major difference between the two types of treatment. More than a third of the patients who had been treated with Zoloft had relapsed, whereas 92 percent of those who had followed the jogging programme were still doing well.*

Muscles that do not move are soon muscles that cannot move.
Pete Egoscue

5.

Musculo-skeletal dysfunction has reached epidemic proportions in our community. By far and away the greater proportion of this dysfunction is personally generated. People without a regular strength and flexibility training are setting themselves up for musculo-skeletal dysfunction. In the first instance it's tight muscles that take the skeleton out of alignment. It's essential to maintain the pelvis in good alignment.

Bill Clinton might have said, 'It's the system, stupid.' So, look after the skeletal system and the parts will look after themselves. And being a system problem the cause of the pain is rarely at the site of the pain.

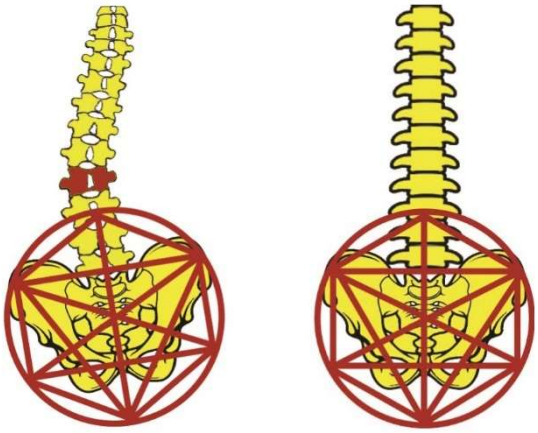
The good news is that if the dysfunction has been personally-generated, there's a better than even chance it can be personally ungenerated – providing the dysfunction can be 'caught' in time.

Musculo-skeletal health depends on a skeleton that's in good alignment.

Good skeletal alignment begins with a pelvis that's in good alignment. If muscles attached to the pelvis have tightened up the pelvis will be taken out of alignment.

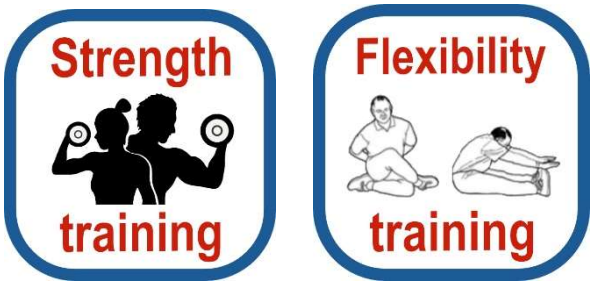
The bones above and below it will gradually be drawn out of alignment causing neck, back, hip and knee pain.

Hence the need for a regular and systematic flexibility training program.



Musculo-skeletal health depends on a skeleton that's supported by strong muscles – hence the need for a regular and systematic strength training program.

Most people with joint and muscle pain have neither a strength nor a flexibility training program.



> The road to success runs uphill.
> Willie Davis

6.

Strength is the ability of a muscle to **exert a force**.

Lack of strength is one of the main contributors to musculo-skeletal injury. 40% of people are not strong enough to push a pen or tap a keyboard without getting back, hip, knee, shoulder, neck and wrist pain.

Muscle strength and tone can be enhanced by working against a **resistance** in a regular and systematic strength training program.

Include the major muscle groups in your workouts: legs, trunk, arms and shoulders.

I recommend a strength training program that includes the following exercises, sets and repetitions.

You need to keep the muscles of your body strong in order to keep your bones in correct alignment and to perform normal physical tasks with ease.

Crook backs, stiff necks, frozen shoulders bung hips, game legs, dicky knees and RSI go with a lack of strength.

STRENGTH TRAINING FUNDAMENTALS

You're setting yourself up for musculo-skeletal dysfunction if you don't have a regular and systematic strength training program. As the muscles become weaker their ability to hold the body in its correct alignment are greatly diminished.

You can imagine, for instance, the cause of your neck problem. The muscles of your neck and shoulders are not strong enough to hold you head on top of your shoulders. Your pelvis is tilted backwards, casing the head to tilt forward and start straining the muscles at the back of your neck. Sooner or later bones are moved out of alignment. Then it really hurts. A quick rub down, an anti-inflammatory and a muscle relaxant will do nothing to fix the underlying cause of the problem.

I've outlined two approaches to strength training. You can work out at home without much equipment, or you can go to a gym.

I recommend you do both. Go to a gym because you get a more systematic workout for strengthening the major muscle groups of your body. If you join a group you'll find new friends. You'll become a regular attendee.

It doesn't matter what age you are. Gyms world-wide are gradually filling up with a new demographic, people in their 50's, 60's, 70's and 80's, all dedicated to keeping themselves strong and flexible.

Most of the falls in older people are caused by lack of strength and a lack of balance. Osteoporosis comes with lack of weight-bearing exercise.

STRENGTH AND MUSCLE BULK

The strength training program with its high number of overall repetitions (12 or more) and ever-increasing weight will provide you with a balanced approach to improving muscle strength (heavier weights, low repetitions) and muscle bulk, (lower weights, high repetitions).

Maintaining muscle bulk is essential if you are to keep your metabolic rate up. If your metabolic rate drops and you keep eating the same amount of food, you'll start putting on fat. Therefore, an essential aspect of a fat loss program is to improve muscle bulk so you burn off more calories, even without exercising.

FREQUENCY

Three times a week is ideal.

WARM UP

I recommend that you spend 30 or more minutes on an aerobic machine, - use a bike, treadmill, eliptical, climber or stepper, or go for a fast walk, shuffle of jog before you start a weight training session. Make sure you get a good sweat up.

The second aspect of the warmup will be the first set of repetitions of each exercise. If the number of repetitions is high it will have its own warm up effect. I recommend you do 12 repetitions in the first set.

WEIGHT, SETS AND REPETITIONS

Repetitions of each exercise are grouped together in sets. 3 - 4 sets is about right for getting a good mix between building strength and muscle bulk. Three is OK. Less than that and you don't have sufficient stimulus to improve strength or muscle bulk.

1st set Start with a weight that you can lift comfortably for about 12 repetitions. This will have its own warm-up effect and prepare you for the heavier weights to follow

2nd set Up the weight and aim to do 10 repetitions

3rd set Up the weight and aim to do 8 repetitions

Using trial and error, you will soon gain an appreciation of the amount of weight that is right for you for each set. Increase the weight to the point where you can just reach the desired number of repetitions.

SUPERSET ROUTINE

I recommend you use what’s called a superset routine.

In a superset routine you do two exercises at the one time, for instance the bench press, (which involves the muscles that push the weight away from you) alternated with the upright row (which involved the muscles that pull the weight back towards you.).

What this does is keep the general activity in the one area of the body by strengthening different muscles, whilst giving each muscle group time to recover before the next set of repetitions.

It saves a lot of time hanging around waiting for muscles to recover. They recover while you’re doing the next set of the alternate exercise.

I've grouped the exercises in such a way that you can work through the exercises quickly and systematically and so that you can give each large group of muscles a rest between sets.

I recommend you

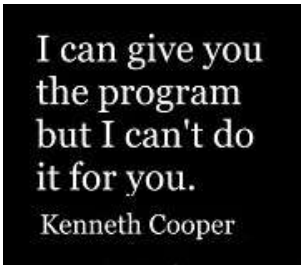
- start with the upper body and arms,
- then move to lower body and legs
- then on to upper body again
- and finish off with abdominals, lower back and hip flexor muscles.

In effect you are doing a mini-circuit, but one which is much more effective in increasing strength and muscle bulk

COMBINATION EXERCISES

I've also chosen combination exercises, that is, more than one muscle group is being exercised at the same time, and indicated alongside each of the exercises below, which muscles of the body are being given a workout.

- Leg extension - quadriceps and buttocks
- Leg curl - hamstrings and lower back
- Bench press - pectoral and triceps
- Seated row - rhomboids and biceps
- Overhead press - deltoid and triceps
- Lat pull down - latissimus and biceps



7.

Flexibility refers to the ability to maintain a wide range of movement about the joints of the body. When they are not stretched regularly, muscles and tendons become tighter and the range of movement around the joints decreases. The implications for postural alignment are wide-reaching, because if one muscle is pulling tighter than another, bones can be moved out of alignment. Sooner or later, you experience pain in one or more joints.

You need to keep the muscles of your body strong in order to keep your bones in correct alignment and to perform normal physical tasks with ease.

Crook backs, stiff necks, frozen shoulders, bung hips, game legs, dicky knees and RSI go with a lack of strength.

Crook backs go well with tight back, buttock, hamstring, hip flexor and calf muscles. Crook necks and shoulders also benefit from stretches that are focused on parts of the body lower down - as per our belief that the site of the pain is probably not the site of the cause of the pain.

Loosen and strengthen muscles attached to the pelvis so that you stand in a better posture and you may well find your neck and shoulders start to feel better.

By far the greater proportion of people who complete our Musculo-skeletal Risk Factor Profile do not have a regular and systematic flexibility (or strength) training program. Is it any wonder then that at least 30% of adults have some form of musculo-skeletal dysfunction.

ONE MINUTE FLEXIBILITY TRAINING PROGRAM

I recommend the one-minute flexibility training program for people with crook backs and necks. What this means is that you need to do each exercise for **at least a minute** to get any benefit from it. If you can stretch for longer, so much the better.

The reason for this is that it takes a muscle at least a minute to get the message that it's safe to loosen up.

The reason for that is that if you were walking across a slippery floor and you slipped you wouldn't gracefully do the splits. You'd tighten up. Likewise, the first reaction to a muscle being loosened is to tighten up.

So, give it time, plenty of time to loosen up.

Many of the exercises will enhance joint function if you stretch for two or three minutes. If you have a really crook back and sore shoulders, you'll get better value from your flexibility training program if you spend a couple of hours at a time doing the exercises over and over again.

If you're having trouble finding time to do your stretches, I suggest you do them while you're watching television. That way you can take your time and spend as long as you like doing them.

I also recommend isometric stretching as an effective way of loosening tight muscles and have included some isometric neck stretches..

8.

THE FITBIT AEROBIC FITNESS ZONE SYSTEM

For the first time in history aerobic fitness can be prescribed, measured, managed and monitored by both individuals and their health, fitness and wellbeing advisors.

I use and recommend the Fitbit zone points system. It fits the aerobic fitness prescription and monitoring bill. The system is based on a scientific formula that includes an 'active dosage' (intensity of effort) based on heart rate..

People exercising score: Fitbit has two aerobic fitness zones:

- 1 point per minute when the heart rate is (circa) above 65% of (estimated) age-related maximum heart rate(220 minus age). For me that's about 90 beats per minute.
- 2 points per minute when the heart rate is (circa) above 75% of (estimated) age-related maximum heart rate. For me that's about 106 beats per minute.

So you don't have to bust your boiler to get zone points. You can even get points whilst .

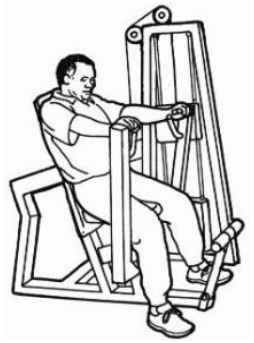
When it comes to the number of points achieved in a day, 40 is good, 50 is better and 60 is best.

Fitbit records and stores the information on the Fitbit phone app and on its own servers. Every week I receive an email with a summary of how much exercise I've done. I can also view it on my phone.

Guidelines for aerobic fitness training:
20 minutes is good,
30 minutes if better,
40 minutes is best.

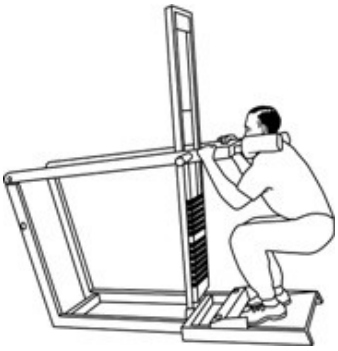
9.

STRENGTH TRAINING EXERCISES IN THE GYM

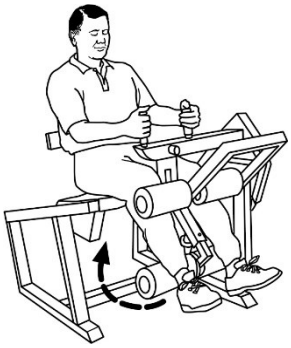


Bench press
Strengthens chest muscles and triceps muscles at the back of your arms.

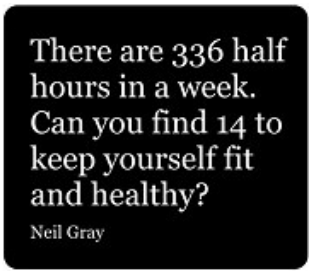
Upright row
Strengthens muscles of your upper back and biceps.



Leg extension
I've chosen the leg extension in this format because as well as strengthening quadriceps Muscles (at the front of the thigh) and buttock muscles, if done with light weights may help reduce knee pain.



Leg curl
Strengthens muscles hamstring ,muscles at the back at the back of the thigh.



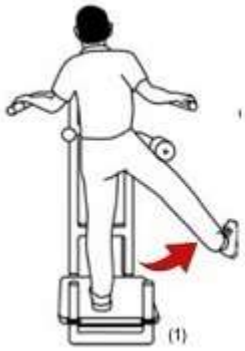
Shoulder press
Strengthens shoulder muscles and triceps.

Lat Pulldown
Strengthens the latissimus muscles (on the outside of your back) that pull your upper arms down to the side of your body - and biceps muscles.

Back
I recommend you do 3 sets of a dozen or so push-backs.

Situps
I recommend you do one set of situps: build up to 20 or more.

If you've got sore hips, make sure you spend time on this machine, particularly Number 1, the abductor muscle strengthener. Make sure you do both sides, not just the side that's painful.



Abductor


Adductor


Hip flexor


Hamstring

GYM ETIQUETTE

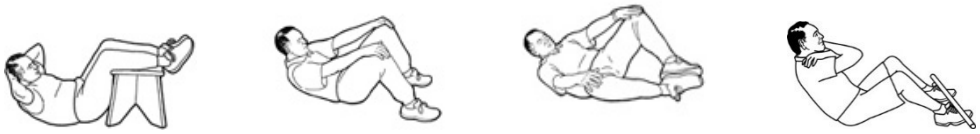
It is very frustrating when you want to use a use a piece of equipment in the gym and someone is sitting on it, resting between sets. It is even more frustrating when they are also looking at their phone. It's rude. It's inconsiderate.

For this reason I recommend people use a superset routine or a circuit of 4 or more exercises, 'resting' from one muscle group while doing the other exercises.

FIVE STRENGTH EXERCISES TO DO WITHOUT EQUIPMENT

1. SITUPS
You can do your situps in a variety of ways.

Gradually build up the number you can do on the trot. 20 feet held situps is good 30 is better and 40 is best.



2. PRESSUPS
King and Queen of shoulder and upper back exercises. Considering that pressups are 'plank-in-motion' they're also a good trunk strengthening exercise.

Gradually build up the number you can do on the trot. 15 is good 20 is better and 25 is best.

3. SQUAT
This is a great exercise for building up the thigh muscles. From a standing position, squat down with your backside as close to your heels as it will go and stand up straight. You may use a heel raise (as illustrated if you need to.) Build up to 20 repetitions at a time. If this is too hard an assignment, hang onto a rail or come down only part of the way. You could put an upturned bucket or pot plant to squat down to.

4. SUPERMAN BACK ARCHES
Take the feet and knees off the ground first.

Build up to a minute's worth of gentle ups and downs.

5. ARM HANG – hanging from a bar until exhaustion.

Hang with palms facing away from you. You will start to develop a small swing. Count the number of swings.

(Warning A large proportion of people are unable to support their own weight at all, so be careful and be ready to land safely on your feet if your hands fail to support you.

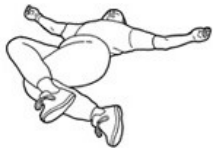
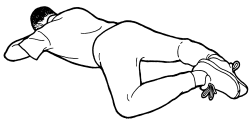
This is a classic test of hand strength. There's no need of a grip strength gadget, just you knowing how long you can support your own weight with your hands.

We first make our habits,
then our habits make us.
John Dryden

10.

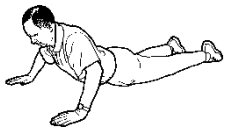
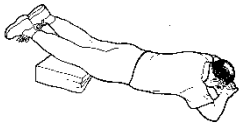
Key flexibility exercises to maintain skeletal alignment

If you're in acute back pain, do the first three (shaded) exercises for the time suggested. Incorporate hip crossover into your regular maintenance program for a minute each side. For (shaded) hip crossover 20 minutes is good, 30 better and 40 best.

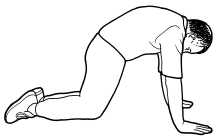
Static back 20 minutes  This is the most comfortable position for anyon with a crook back. Lie in this position for 20 minutes or more to settle down muscles attached to pelvis and spine.	Supine groin stretch – 20 minutes each side  Laying on back, one leg on bolster the other on the floor. Relax in this position for 20 minutes each side	Hip crossover – at least 20 minutes, 5 minutes a side over and over.  Start with the heel of the right foot up toward the top of the left knee. Push the right knee way fro you. Then drop the right foot and left knee onto the floor on the left side of your body.
Hip stretch  Tuck the right foot behind left knee. Take right knee over close to the floor on the right side of your body. Repeat on left side.	Super hip and thigh stretch  Start with feet together and extended. Swing the right leg out over the left and grab hold of the right foot with your left hand. Keep your right shoulder o the floor. If you can't grab your foot, grab your sock or the bottom of your trouser. Repeat on other side	Heels over head  You used to be able to do this when you were a kid. Start doing it again. 30 seconds is enough. With every breath you breathe out, creep back a little further. When you can hold your toes with the back of your hands on the floor, report back
Sit up straight buttock stretch  Sit with both legs straight out in front of you. Fold the left leg under the right and then the right over the left. Prop yourself up on your knuckles and lean forward, 20 deep breaths.	Hamstring  With legs outstretched hold on to lower leg as far down as is comfortable. Bend knees slightly and place hands further down, then straighten legs. Do for times, each time extending the stretch.	Reverse frog - knees out  Knees out, soles of feet together, chin on chest and front of pelvis on the floor. Let your feet hang down.

There is a constant struggle between our need to move more and more and the pressure of science and technology to design and produce machines that enable us to move less and less.

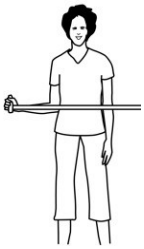
Garry Egger

Cobra	Reverse cobra	Buttock stretch
		
Keep pelvis on the floor. Stretch upwards. Breathe out and feel lumbar spine loosening off.	Place a cushion underneath your knees. Do this exercise for as long as you like	Start on hands and knees. Place right leg over the left, onto the knee and the laces and then slide it back and prop on your elbows.

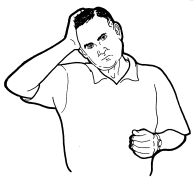
Alternate cat and dog stretch

Hip flexor stretch	Cat stretch	Dog stretch
		
On one knee with the other foot well forward, pelvis arched and back straight. Stretch forward to loosen groin muscles.	With hands close together under the chest, tuck the tummy in, push the pelvis forward and get a high arch in thoracic spine. Breathe out. Alternate with dog stretch.	With hands close together under your chest, poke your bottom out and get a hollow in your lumbar spine. Breathe in. Alternate with cat stretch.
Quadriceps stretch	**Calf stretch**	**Pillow squeeze**
		
Place foot on a kitchen bench. With every breath you breathe out, lean back further. This is a must do for knee pain. Keep knees together.	Stand for 3 minutes with back to wall on sloping board.	Sit up straight, hollow in lumbar spine and shoulders pinched. Squeeze pillow 15 times.

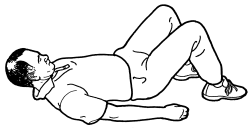
NECK, SHOULDERS AND ARMS - strength and flexibility exercises

Stretch band and pully exercises	Doorway squeeze	Arm circles
		
There are a multitude of strength exercises you can do using stretch bands at home and using pullies in the gym.	Stand with one foot just inside a doorway and push forward to stretch the muscles of the upper back. Do 20 repetitions.	With palms down and thumbs pointing forward, circle arms forward 20 times. Turn palms up, point thumbs back and circle backwards 20 times.

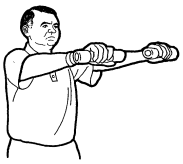
Shoulder blade pinch  Squeeze elbows back to pinch shoulder blades. 20 times.	Elbow squeeze  With knuckles on temples, swing elbows back as far as you can and then to touch at the front. 20 times.	Pull your head in  Pull your head in underneath your armpit and stretch the muscles at the back of your neck. Do this for a minute each side.

Neck isometric strength/stretch  Push the head against the right hand for 7 seconds, relax and let head flop toward the shoulder. Repeat two more times then do the same thing to the left.	Neck isometric strength/stretch  Looking out over your right shoulder, push the head against the hand for 7 seconds, relax and turn head further behind. Repeat twice then do the left side.	Shoulder stretch  With a partner, one person pulls the elbows back to stretch the muscles at the front of the shoulder.

NECK STRENGTHENERS AND MOBILIZERS

Neckups  Lift head up toward the chest. Don't let head touch the ground until you've done 10 repetitions.	Eye to shoulder  Lift head up a centimetre and then turn toward right shoulder and then left. 5 times each side.	Ear to shoulder  Lift head up a centimetre. Take right ear toward right shoulder and then left ear to the left shoulder. 5 times each side.

SHOULDER STRENGTH ROUTINE - WITH DUMBELLS - build up to 4 'laps' of the routine

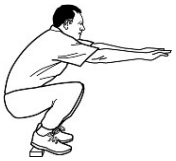
Arms to the front  4 repetitions	Arms to the side  4 repetitions	Arms above the head  8 repetitions

UNIVERSAL FITNESS TEST

1. Body composition.
How close are you to your ideal weight? You can estimate the number of kilograms over your ideal weight or use percent body fat..

2. Lower body strength – squat
How many squats can you until exhaustion? Your bottom must go lower than the crease at the back of your knees.

If you've got sore knees either don't proceed or **proceed with caution**. Suggest a 3cm heel raise.

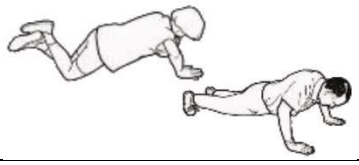


3. Front of body strength – sit-ups to exhaustion. Arms crossed and hands clasping alternate shoulders: knees bent.

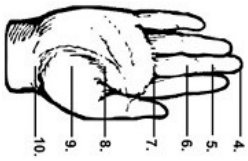
There is evenly divided conjecture about whether it is safe to do situps with feet held. I believe the exercise is safe.

If it hurts, stop doing it.

4. Upper body strength – press-ups to exhaustion.
If you've got painfully sore shoulders either don't do this exercise or **proceed with caution** – and don't do too many.



5. Hamstring flexibility - sit and reach
Sitting on the floor, with feet outstretched in front of you, see how far down toward or past your toes you can reach with your fingers. Keep the back of your knees flat on the floor.



6. Buttock flexibility - ability to sit up straight with legs crossed
With legs crossed and hands clasped behind your back, see if you can sit up straight without falling over backwards.

7. Shoulder function
Stand with heels and back against the wall, arms and wrists vertically in the 'surrender position. The further they are away (in cms) the lower the score.

8. Aerobic fitness - 20m laps in 5 minutes

How man 20m laps can you complete in 5 minutes.

One foot must go past the line each time you turn.

UNIVERSAL FITNESS TEST – scores for 'regular folks'

1. Body composition: how close are you to your ideal weight?
Current weight …….. Ideal weight …….. Percent body fat ……

Kg over ideal wt	>25	<25	<20	<15	<10	<7	<4	<2
% fat men	<40	<40	<36	<32	<29	<26	<23	<20
% fat women	<>50	><50	<46	<42	<39	<36	<33	<30
	3	4	5	6	7	8	9	10

2. Lower body strength – squats – until exhaustion #.....

>6	6	8	10	12	14	16	18	20	22	24
0	1	2	3	4	5	6	7	8	9	10

3. Front of body strength – situps feet held - until exhaustion #……....

>6	6	8	10	12	14	16	18	20	22	24
0	1	2	3	4	5	6	7	8	9	10

4. Upper body strength – press-ups – until exhaustion #……....
Men on toes, women on front of thighs.

>6	6	8	10	12	14	16	18	20	22	24
0	1	2	3	4	5	6	7	8	9	10

5. Hamstring flexibility – sit and reach. How far down toward or past your toes you can reach with your fingers?

Can't touch	Fingers			Palm			Wrist
0	4	5	6	7	8	9	10

6a. Right buttock flexibility – sit up straight, legs crossed, hands clasped behind back.

Left leg under	Big fail	Nope	Almost	Just	Good	Perfect
0	0	0	1	3	4	5

6b. Left buttock flexibility – sit up straight, legs crossed, hands clasped behind back

Right leg under	Big fail	Nope	Almost	Just	Good	Perfect
0	0	0	1	3	4	5

Ttl

7. Shoulder function - stand with back against the wall, arms vertically in the 'surrender' position. Measure distance between the arms and wall.

>15	15	13	11	9	7	5	3	2	1	Flat
0	1	2	3	4	5	6	7	8	9	10

8. Aerobic fitness – 5 minute, 20m lap run. Laps …....

Men	<22	22	24	26	28	33	32	34	36	38	40
Women	<20	20	22	24	26	28	30	32	34	36	38
Points	0	1	2	3	4	5	6	7	8	9	10

X 3

If you want to be fit and healthy, exercise like fit and healthy people exercise!

TOTAL


Fitness Frontline