

Exercise for all ages and stages

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For physical training is of some value, but godliness has value for all things, holding promise for both the present life and the life to come.” 1 Timothy 4:8

In the 5th century BC, the ancient physician
Hippocrates stated:

“All parts of the body, if used in moderation
and exercised in labors to which each is
accustomed, become healthy and well
developed and age slowly;
but if they are unused and left idle, they
become liable to disease, defective in growth
and age quickly.”

“move it or lose it”

Babies, Toddlers & Preschool

- *All comments in Italics are taken from*

“Physical Activity and Exercise Guidelines for all Australians” produced by the Australian Government Department of Health and Aged Care.

Physical Activity

Toddlers & preschooler should get at least 3 hours of various physical activities each day, including energetic play.

- Physical activity for young children mainly happens through unstructured, active play. As daunting as that those numbers sound most children have that amount of playtime.
- Give your children the freedom to create their own play and do things that encourage independence and appropriate risk taking while supervised.
- Parents and carers can also be great role models for their children, by being active themselves.

Babies, Toddlers & Preschool

Limit their restrained sitting and screen time

No more than 1 hour at a time in a stroller, car seat or high chair

Babies - Do not allow any screen time.

Toddlers -do not allow any sedentary screen time.

Preschoolers - do not allowing any more than 1 hour of sedentary screen time per day – less is better .

5 – 17 years School Age Children

Physical Activity

- *We recommend children and young people do at **least 60 minutes each day of moderate to vigorous physical activity** It doesn't have to be a full 60 minutes at once – several shorter sessions through the day work too.*
- *At **least 3 days per week**, children and young people should incorporate **vigorous activities** and activities that strengthen muscle and bone in the 60 minutes.*
- *Children and young people should also do several hours of various light physical activities each day.*

5 – 12 years old Infants and Primary School

- Physical activity at school, at playtime and sport time.
- Activities can also include walking, bike riding or scootering to school (if safe and reasonable distance). Let them carry their school bag.
- Great time for parents to play active games with your children, it's good for you too.

5 -12 year olds

This age is a good time to find a sport, or exercise that will take them into the teenage years.

- Instil a practice of enjoyable physical activity
- Something the family can do together.
- Parents should be role models

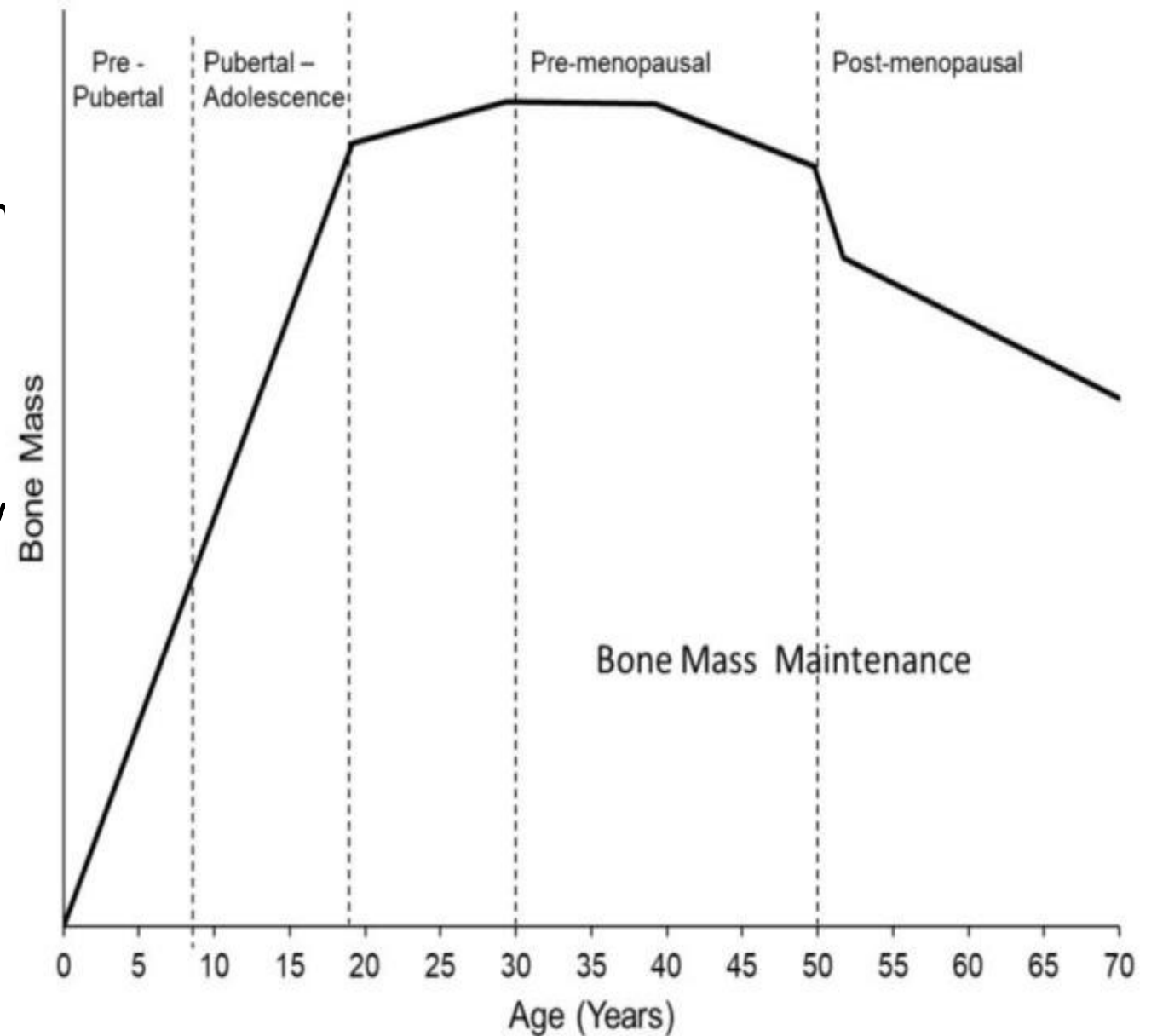
[Establish this essential, life-enhancing habit now](#)

13 – 17 years old

- Make faster physical progress than at any other point in their life.
- They can handle new elements in their workouts every few weeks.
- Strong bones and muscles, fewer injuries, & quicker recovery
- **Teenagers** have a much harder time reaching the recommended activity level. High school PE and sport help.
- Try to keep them in a regular sport or exercise activity

Osteoporosis

- To have lifelong fracture protection and decreased incidence of osteoporosis in later years you need to build up your bone density – therefore a peak bone mass.
- Bone loading exercises (weight bearing exercise) in children & teenagers achieve the greatest bone density increase



Exercise Early and Often: Effects of Physical Activity and Exercise on Women's Bone Health

Troy et al 2018

6 – 17 years old

Limit time spent in sedentary behaviour

- *Limiting the time spent sitting or lying down ([sedentary behaviour](#)) – especially in front of screens*
- *Break up long periods of sitting as often as possible.*
- *We recommend no more than 2 hours of sedentary recreational screen time per day. This does not include screen time needed for schoolwork.*
- *This is very difficult to achieve, especially teenagers. TRY your best*

ADULTS 18 to 100 years



GENERAL EXERCISE GUIDELINES

- No matter what your age, weight, health problems or abilities, you should try and do some form of daily physical activity.
- It's never too late to start – “Muscle responds the same way to exercise regardless of your age, your body remains adaptable all your life”
- It improves cognitive function
- It lifts your mood – release of endorphins
- It increases blood flow to all structures – improving flexibility

HOWEVER

- Before starting any new exercise program consult your doctor
- Start slowly, Increase gradually
- Wear comfortable clothes & shoes
- Drink plenty of water during & after
- DO **NOT** believe 'NO PAIN NO GAIN'
- REST is **NOT** a rude word



AMOUNT of EXERCISE

- *Adults (18 - 64) should be active most days, preferably every day. **Each week**, adults should do either:*
- *150 - 300 mins (2.5 - 5 hours) of **moderate intensity** physical activity – such as a brisk walk, golf, mowing the lawn or swimming. (30 – 45 minutes daily)*
- *75 – 150 mins (1.25 to 2.5 hours) of **vigorous intensity** physical activity – such as jogging, aerobics, fast cycling, soccer or netball*

AMOUNT of EXERCISE

- *For older adults (65 years and over) we recommend at least 30 minutes of **moderate** intensity physical activity on most, preferably all, days of the week.*
- *If you can do more than 30 minutes, you will get extra benefits.*

INTENSITY of EXERCISE

Using your heart rate as a measure

Your maximum heart rate (max HR) is $220 - \text{your age}$.

- Vigorous intensity is to work up to 70 - 85% of your max HR
- Moderate intensity is to work at 50 – 70% of you max HR

INTENSITY of EXERCISE

Using breathlessness as a measure

Talk Test

- Vigorous Intensity Exercise - Talking is difficult; you can only say a few words at a time.
- Moderate Intensity Exercise - You can hold a conversation but not sing.

INTENSITY of EXERCISE

RPE (Rate of Perceived Exertion/ Effort): Using effort as a measure

Rate your perceived effort is a scale of 0 to 10:

0: No exertion (sitting or lying down) – you are using no effort

5: Moderate effort (brisk walking) – you are comfortable with this effort

10: Maximum effort (sprinting) – this is the hardest I have worked in my whole life

- Vigorous Intensity Exercise: 7 or higher.
- Moderate Intensity Exercise: Around 5-6 on the scale.

TYPEs of EXERCISE

1. Aerobic - for your heart, lungs and blood vessels
2. Weight bearing (WB) - to help maintain bone strength
3. Strength training - to help maintain muscle mass
4. Flexibility exercises - to help you move more easily
5. Balance training - to improve your balance, help prevent falls.

TYPE of EXERCISE - Aerobic

Vigorous (High) Intensity – jogging, running, racewalking, hiking up hill, fast cycling or cycling uphill, fast swimming, fast dancing, some martial arts, jumping rope,
Sports that have lots of running - soccer, netball, hockey,
Court sports - basketball, handball, squash, racquet ball
Gym sessions - aerobics, step aerobics, gym classes or circuit training, boot camp
Housework - heavy gardening with digging or hoeing, shovelling snow or dirt, and carrying heavy loads (for example, bricks).

TYPE of EXERCISE - Aerobic

Moderate intensity - brisk walking sweeping the floor, walking briskly, dancing, vacuuming, washing windows, shooting a basketball, general yard or garden work, mowing the lawn, aqua aerobics, cycling, washing the car, tennis, walking the dog, golf (no cart),

Light (no intensity) activities include walking slowly (for example, shopping or walking around the office), making the bed, preparing food, and washing dishes

TYPE of EXERCISE - Weight bearing exercise

High impact exercises - jumping, circuit, running, tennis, squash, gymnastics, stair climbing and descending, soccer, netball, boot camp

Lower impact exercises - walking, weight training, trampolining or exercise on a mini trampoline

NOTE - Cycling, swimming, aqua aerobics, & rowing don't provide enough impact to improve bone density.

TYPE of EXERCISE – Strength training

*All ages must include strengthening activities at **least 2 days** each week.*

Strength training exercises may be part of your aerobic, weight training & flexibility exercises

2 types – using both methods are the best

1. Strength / Resistance training is the use of fixed weights (barbells) and weighted gym machines (hydraulic machines)

TYPE of EXERCISE – Strength training

2. Functional fitness / functional training uses bodyweight or free weights, or normal everyday functional activities.

- Picking up small children, household tasks that involve lifting, carrying or digging, including carrying groceries.
- push-ups, pull ups, burpees, walking lunges(long stride), jump squats, inverted rows, side lunges, squats(calisthenics)
- Lifting free weights (dumb bells), using resistance bands

TYPE of EXERCISE – Flexibility

To maintain flexible muscles, joints, and soft tissues that can move through an unrestricted, pain-free range of motion, you need to stretch, lengthen, and contract these structures in a smooth and efficient movement.

Exercises for maintain flexibility

- Pilates, Yoga, Tai Chi, Martial arts, dancing, bowls (indoor and outdoor), sweeping, mopping or vacuuming, a stretching program

TYPE of EXERCISE – Balance

- Good balance isn't just staying on your feet; it's about maintaining harmony within your body and navigating the world around you with confidence.
- A **good sense of balance** is important as it allows us to recognize our position relative to other objects around us, including the surface on which we are standing, walking, or running.
- It enables safe everyday functioning, keeping us upright, enabling us to walk without assistance, and helping prevent falls and injuries. When you're walking through open spaces, negotiating steps, or stepping over obstacles, you need good balance.

TYPE of EXERCISE – Balance

Exercises to improve balance

Standing on 1 foot, walking a straight line, or traversing a low balance beam. Walk, jog, or run on uneven surfaces outside, side leg raises, half squats, heel raises, walking heel-to-toe, Tai chi, standing on tiptoe to reach something on the top shelf, walking up and down the stairs, Pilates.

GENERAL ADVICE

- *Before exercise* – you must include a 5 -10 minute warmup phase, do the exercise you are going to do but slower. Use dynamic stretching
- *After exercise* – to help avoid muscle soreness and injury do a cool down 5 -10 minutes it's a slower pace less intensity exercise followed by static stretches 10 – 30 seconds each muscle group

“Stretch when you have sweat”

WARNINGS - STOP exercise IF: -

- Chest pain or pressure, tingling down left arm, or jaw pain
- Heartbeat is 'out of wack', or HR doesn't come down with rest
- Sudden or persistent shortness of breath that does not get better with rest
- Severe headache
- Dizziness/feeling faint
- Leg cramps
- Sudden unusual large amount of sweat

Let's get Physical

- Balance, flexibility and strengthening exercise are available on attached handout



Exercises according to age

- *“You can’t turn back the clock, but you can wind it up!”*

18 - 20's

- Absolute adult physical peak, the fastest reaction times
- Aerobic, weight bearing & strength training
- Be extremely adaptable, have different aspects of training change the intensity, volume and type of exercises
- Keep it fun. Explore, play, and learn new physical skills.
- Limit your screentime – 2-4 hours daily. Unless for work or school work

30's & 40's

Increased obligations at home, family and work means less time and energy to exercise

Get a step counter. 10,000 steps daily

Aerobic, weight bearing and strength training now add flexibility exercises

Good exercise for the time poor is **high intensity interval training**, done for 30 minutes 2-3 times a week. This is bursts of vigorous exercise, up to 80% HR max for 5 -10 minutes, broken up with periods of lower-intensity exercise, strength & flexibility exercises

- At this stage of life it's all about squeezing fitness into the cracks in your schedule.”

30 & 40's

- ***weight bearing*** - This is also the point at which exercise becomes more critical. After 30 you can maintain your bone density just no longer not build it up
- ***strength training*** *add* to exercises to build up your core to protect your back
- ***flexibility exercises*** (stretches) needs to be increased
- Especially those with sedentary jobs - Eight hours a day in a chair can have serious effects in time, the hips, shoulders, rib cage, and ankles begin to tighten; back, neck, and knee pain also become common. This is because of changes in the fascia — the pliable connective tissue running through your body. Over time, it dehydrates and stiffens, so keep it flexible, by stretching and increasing blood flow to all these structures.
- Incidental exercise now important

Incidental exercise

AT HOME



Do some of your own chores instead of hiring help

Tend to your garden

Park further away from your house

Go for a morning walk before breakfast

Choose an activity to do while you watch television (e.g. Exercise circuit, stretching, standing to do the ironing)

Get up to deliver a message rather than calling or texting family

AT WORK

Walk or cycle to work (if able)

Get off the train/tram/bus a few stops early and walk the rest of the way

Get up regularly to get your printing

Take the stairs instead of the lift

Encourage team members to join you for a “walking meeting” rather than always having sitting meetings

Get up to deliver a message rather than sending that email



EVERY DAY

Park further away from your destination and walk the rest of the way

Walk the full length of the supermarket rather than ducking in and out

Choose leisure activities that will get you moving more (going to the park with the kids)

Walk your dog instead of getting a dog walker to take them

Stand up whilst doing a puzzle rather than sit

Try a new sport such as lawn bowls, golf, dancing, or water aerobics



Scary statistic

In healthy sedentary adults once you are 30 if you don't exercise - every decade you will lose 10% of your muscle mass & bone density

- WHO Guidelines on Physical Activity and Sedentary Behaviour
- *No authors listed*
- Geneva: World Health Organization; 2020.
- [WHO Guidelines Approved by the Guidelines Review Committee.](#)



50's

Aches, pains and chronic conditions appear

Don't slowdown. Pay attention to your body - clues like soreness and fatigue in the days following exercise mean you need a gentle day between hard exercise days

Aerobic - high intensity interval training, maybe only once a week

weight bearing, - such as daily walking, is recommended. Walk fast enough so that your breathing rate increases and you break a sweat.

strength - as usual 2 x week

a flexibility exercises

now add some balance work. - Tai chi can be excellent for balance and relaxation.

Perimenopause, menopause and post menopause

- Perimenopause starts in the late 30s or 40's.
- This is the time leading up to your last period, as your ovaries gradually slow down. Perimenopause usually takes place over a period of time, (4 -10 years)
- Menopause is usually in early 50's.
- During both these stages your levels of oestrogen and progesterone are decreasing. Causing loss of bone density and increased risk of heart attack

Perimenopause, menopause and post menopause

- Post-menopause refers to the final stage of the menopause process and marks the end of the reproductive stage of life. You have had no period for 12 consecutive months.
- No matter which stage you are in your exercise program should continue the usual aerobic, strength, flexibility and balance exercises. Concentrating on you weight-bearing activity – at least five times per week for 30 minutes. Weight-lifting, walking

60's

At this stage you can be accumulating more chronic conditions

If you are already physically active, stay active.

Whatever exercise you choose, strike a balance between respecting your limitations and challenging yourself.

Listen to your body.

60's

Aerobic and weight bearing exercise – moderate intensity 30 minutes daily

Strength combined with more power exercises 2 or 3 x a week

- Training for power involves more repetitions rather increase in weight

Flexibility - at this age you will notice stiffer joints.

Stretching - do some form of dynamic stretching every day, anytime and anywhere

Balance exercises – everyday, anytime anywhere

70's

Active seniors should keep their usual program

Aerobic, weight bearing, strength, balance and flexibility exercises

Just take your time, monitor your response, and adjust accordingly. You may need to do a longer warm-up and to rest more between sets.

If you haven't strength trained regularly, muscle loss will now reach critical levels, interfering with balance, gait, and other daily activities.

You can take up strength training, those changes are still reversible

Scary statistic

“Falls are a leading cause of death among people over 65 and contribute to more than 40 percent of all nursing-home admissions.”

Falls in older Australians 2019–20: hospitalisations and deaths among people aged 65 and over. Web report [Falls in older Australians 2019–20: hospitalisations and deaths among people aged 65 and over, About - Australian Institute of Health and Welfare \(aihw.gov.au\)](#)

Rest when you're sick or injured — but get up and move as much as you're able, as soon as you're able.

- Once rest was prescribed almost universally for [back pain](#), illness, and discomfort of all kinds, bed rest has been shown in studies to be associated with loss of strength and endurance, changes in soft tissue, bone loss, joint disease, high blood pressure, and weakening of the cardiovascular system. It's one reason falls are a danger for people over 80: The resulting injuries may heal, but the health complications from staying in bed for weeks can be irreversible.

80's and beyond

By this point, nearly everyone has aches and physical limitations from previous injuries or illnesses, arthritis, periods of sedentary living, or chronic overuse.

You might be tempted to believe you are too old to exercise, and should rest, **NO** too much rest may do more harm than good.

If you aren't confident to go walking because the ground isn't even and you are worried about a fall. It's OK to use a stick or walking pole for balance.

80's and beyond

Moderate intensity aerobic activities / weight bearing exercise (brisk walking) aim for at least 150 minutes a week, (30 mins 5 x week)

Strength exercises should continue to be at least 2 days a week.

Most important now are exercises for flexibility and balance they should be done daily to prevent falls and injuries.

(chair yoga, water aerobics, walking in water)

Final take home message

Keep moving throughout your life. Move it or lose it
Consistent daily exercise is what benefits your health most.

Time marches on, we cannot to stop the aging process, however, “we can slow it down.”

2 Corinthians 4:16 “Therefore we do not lose heart. Though our outer self is wasting away, yet our inner self is being renewed day by day.”