



SPÓRT ÉIREANN
SPORT IRELAND



1.6 MILLION PEOPLE

PARTICIPATE IN SPORT ON A WEEKLY BASIS



PARICIPATION BY GENDER

45.3% MALE

40.8% FEMALE

TOP 5 SPORTING ACTIVITIES

- 1 EXERCISE 12.4%
- 2 SWIMMING 8.5%
- 3 RUNNING 6.2%
- 4 CYCLING 5.1%
- 5 SOCCER 4.1%

ACTIVITY LEVEL



MEET THE NATIONAL
PHYSICAL ACTIVITY GUIDELINES*



ARE SEDENTARY

*30 mins moderate physical activity,
5 times a week

86% FEEL THAT THERE ARE MORE
OPPORTUNITIES NOW TO PARTICIPATE IN
SPORT THAN THERE WERE 10 YEARS AGO

57% OF SPORT PARTICIPANTS RECEIVE
COACHING OR TRAINING

28% CURRENTLY USE WEARABLE TECHNOLOGY
TO MEASURE THE AMOUNT OR NATURE OF
PHYSICAL ACTIVITY THEY UNDERTAKE

66.2% WALK FOR RECREATIONAL PURPOSES

Developed by Laura McIntyre for Sligo GAA





What is physical activity?

Physical activity is defined as any bodily movement produced by skeletal muscles that require energy expenditure. Regular physical activity has significant health benefits (WHO, 2018).



Benefits of physical activity

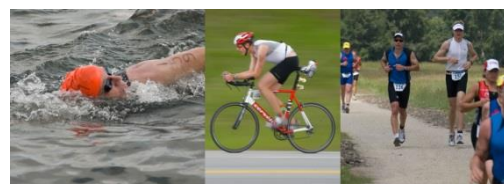
- All - cause mortality is delayed
- The risk of developing non – communicable diseases is reduced including - Coronary Heart Disease (CHD), stroke, type II diabetes and some forms of cancer (Bowel and breast cancer)
- It lowers predisposing risk factors to non- communicable diseases such as lower blood pressure, improving lipoprotein profile, enhances insulin sensitivity and plays an important role in weight management.
- Preserves bone mass and reduces the risk of falling
- Enhances feelings of energy, well-being, quality of life and cognitive function
- Improves self – esteem
- Reduces symptoms of depression and anxiety

Garber (2011) & Get Ireland Active (2018)

Types and recommendations for physical activity

It is recommended by ACSM (American College of Sports Medicine) that Adults should undertake 150 – 250 minutes per week of moderate / vigorous **cardio respiratory activity**. This can be broken into 30 minutes 5 days per week. The 30 minutes does not have to be carried out at once but should last for at least 10 minutes at a time. This can be encompassed in a 10-minute walk to and from work and a 10-minute walk at lunch time (ACSM, 2018).

What is important is the words moderate / vigorous this can be hard for people to measure, if you have a fit bit or other forms of wearable technology then this is 64 – 76 % of your Heart Rate Maximum (HRM) (calculated as: $220 - \text{age [in years]}$) e.g. for a person aged 40 moderate physical activity is calculated as follows: $\text{HRM} = 220 - 40 = 180$, $(64 \times 180)/100 = 115$, $(76 \times 180)/100 = 136$. So, for the 40-year-old to be considered working at a moderate intensity their heart rate would be between 115 BPM – 136 BPM (Garber, 2011). Another way to measure how hard you work is your ability to speak – when working at a moderate intensity you should be able to hold a conversation with somebody but not be able to sing to them and vigorous would relate to you only getting a couple of words out at a time





and not being able to finish sentences. By modifying different factors such as Frequency, Intensity, Time & Type (FITT principle) the exercises can be varied for different levels.

Resistance exercise should be carried out on each muscle group (legs, arms, back and chest) 2 / 3 days each week. With sets of 2 – 4 designed to improve strength and power. 8 – 12 repetitions develop strength and power with lower reps and higher weights developing power and 15 – 20 repetitions developing muscular endurance. 48 hours should be left between resistance sessions. (ACSM, 2018)



With resistance exercises to fully benefit from them it is suggested that the 4 : 2 rule is used – this implies that the toughest part of the exercise (the concentric phase) is carried out in 2 seconds and the easy part of the exercise (eccentric phase) is held for 4 seconds. This improves muscle strength and also helps with the balancing of the exercises (Kraemer et al, 2002). The resistance component

of fitness can be broken into 2 main parts: strength and endurance and both of these should be trained separately. In order to see the best results muscles should be worked to overload and then progressed when the exercise no longer overloads the muscle. This increases strength and endurance Variation is just as important during exercise and working the same muscles using different movement patterns and exercises is very beneficial. And remember if you don't use it you'll lose it so maintain resistance training 2 – 3 times per week. There are 4 ways of changing the exercise to maintain overload and progression Frequency – how often you exercise, Intensity – how difficult is the exercise, Time – the length of time you spend doing the exercise or the number of repetitions and the type – what is the movement pattern. By changing these individually you can build strength and endurance and progress effectively

Flexibility exercises ideally should be carried out every day but at least 3 days each week to improve and maintain Range of Motion. Each stretch should be held, at the point of tension or tightness, for 10 / 30 seconds and repeated until each muscle group is stretched for 60 seconds. Ideally a stretch should be carried out when the muscle is warm, to avoid injury and the stretches can vary based on the needs of the individual with deeper stretches such as ballistic and PNF stretches often being recommended. (ACSM, 2018)



Neuromuscular exercise is recommended 2 – 3 days per week for at least 20 – 30 minutes. These exercises should involve a range of motor skills – balance, agility, co-ordination and gait) and multifaceted activities such as yoga or Tai - ji. (ACSM, 2011)





Below is a table would represent a suggested normal week of exercises for individuals.

	Monday	Tuesday	Wednesday	Thursday	Friday - Recovery	Saturday	Sunday
Cardio	X – Run/ Walk	X – Bicycle	X – Step aerobics		X – Swimming	X – combination of run/cycle/skip @ 10 mins	
Resistance	X – Total Body GYM			X – Kettlebell			X – HIIT (High Intensity Interval Training)
Flexibility – Total Body	X	X	X	X	X	X	X
Neuromuscular			X – Yoga			X – Agility	X – co- ordination and balance

* **Note: that you should stretch before and after cardio and resistance exercises**

Cardiorespiratory Exercises

Running / walking, cycling, swimming, step aerobics, skipping - any forms of these carried out in 10-minute intervals for at least 30 minutes daily can bring with it great health benefits.



Resistance Exercises – carry out total body exercises each session, do not split.

- Arms
 - Biceps – Bicep curl, Hammer curl
 - Triceps – triceps dip, triceps extension, Triceps kickback
 - Shoulders – shoulder press, lateral shoulder extension.
 - Latissimus Dorsi – latissimus pull down, prone row
- Legs
 - Calves – toe raises, toe press
 - Glutes – resistance band workout – squats, lateral kicks & backward kicks
 - Hamstrings -hamstring curl, Nordic curl
 - Quads - leg press, dead lift
 - Hip flexors – lunges, bridge
- Back
 - Rhomboids – supine fly, over - head row.
 - Trapezius – upright row, shoulder shrug
- Chest
 - Pectoralis major & Pectoralis minor – prone fly, bench press
- Abdominals – plank, v- shape sit ups, pike, side plank, scissor kicks.

A sample session plan for a total body resistance workout would look like this:

* **Note: A warm up should be performed before beginning resistance training**

Exercise	Muscle targeted	Repetitions	Sets	Speed
Leg extension	Quadriceps (Thighs)	8 – 12	2	2 – 4
Leg curl	Hamstrings (back of thighs)	8 – 12	2	2 – 4
Chest press	Pectorals (Chest)	8 – 12	2	2 – 4



Seated row	Trapezius and rhomboids (Top of back)	8 – 12	2	2 – 4
Lat pull down	Latissimus dorsi (Middle back)	8 – 12	2	2 – 4
Shoulder press	Deltoids (Shoulders)	8 – 12	2	2 – 4
Hammer Curl	Biceps (front of arm)	8 – 12	2	2 – 4
Triceps kickback	Triceps (Back of arm)	8 – 12	2	2 – 4
Calf raise	Calf (Back of lower leg)	8 – 10	2	2 – 4
Reverse crunch	Abdominals (Core)	8 – 12	2	2 – 4
Superman	Erector spinae (lower back)	8 – 12	2	Hold for 5 seconds
Squat	Hamstrings, quadriceps and gluteus (top of legs)	8 – 12	2	2 - 2
Lunges	Hip flexors (front of hips)	8 - 12	2	2 - 2


To adapt each of the exercises add/ increase weight. – When increasing weight at first decrease the repetitions and then gradually build repetitions.

Other forms of total body workouts include – kettlebells, HIIT (High intensity Interval Training), boxercise and Cross fit.

Flexibility Exercises

Start from the head and work down wards or start from the feet and work upwards - just keep a routine and stay with it. This example starts at the legs and works up.

- * **Note: that muscles should be warm before stretching them this can be done following an aerobic warm up or after a hot bath.**

Name of stretch	Body part	Muscle stretched	Teaching points	Safety points	Adaptions/ progression
Calf stretch	Back of lower leg	Gastrocnemius / soleus	<p>Begin in the sitting position</p> <p>Keeping one leg extended, place the sole of the foot at the knee of the extended leg</p> <p>Slowly lean forward from the hip, reach toward the toes and slightly pull the toes towards the body</p> <p>Stretch to the point of tension hold for 30 seconds</p>	<p>Do not bend the extended leg</p> <p>lean from the hips as opposed to rounding the shoulders</p> <p>move slowly in and out of the stretch</p> <p>keep breathing</p>	<p>use a towel around the foot if the toe cannot be reached</p> <p>For a deeper stretch lean further the hip</p>
					
Quadriceps stretch	Front of upper leg	Quadriceps	<p>Lie on the side with both legs extended, one over the other.</p> <p>Extend the bottom arm above the</p>	<p>Keep knees together, one on top of the other</p> <p>Push pelvis forward and</p>	<p>use a towel if you cannot reach the laces</p> <p>tighten the buttocks and</p>

head and lay the head on the upper arm

Bend the top leg, bringing the foot towards the buttock and grasp the shoe lace with the free hand.

Hold for 30 seconds. Repeat for the other leg.

lift chest

Keep bottom leg straight and the toe pointed

Avoid Leaning onto buttocks

push hip out for a further stretch



Hamstring stretch

Back of upper leg

Hamstrings

Begin lying on your back with both legs extended.

Raise one leg so it's at a 90 degree angle with the floor.

Support the leg by holding below the knee.

Bring the leg toward the chest until you feel a point of tension.

Hold for 30 seconds. Repeat for the other leg

Keep the lower back on the ground.do this by pushing the pelvis toward the ground

Avoid lifting the head or upper back

Breath normally

Use a towel at the back of the leg if the stretch is too much

Bend the leg at the hip toward the torso to deepen the stretch



figure 4	Bottom	Gluteal	<p>Begin lying down, belly up with both legs extended.</p> <p>Bend the right leg and adjust so the right ankle rests above the left knee</p> <p>Bend the left knee and bring toward the torso holding the back of the left leg above the knee</p> <p>When the point of tension is reached hold for 30seconds and repeat for the left leg</p>	<p>Head and shoulders should not leave the ground</p> <p>Keep the hips square, do not twist hips</p> <p>Keep breathing regular</p>	<p>to make it easier keep the foot on the ground</p> <p>to advance the stretch push the right elbow against the inside of the right thigh</p>
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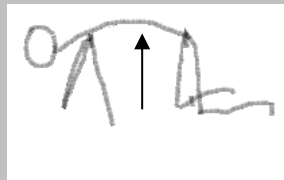
Groin stretch	Inside of upper leg	Adductors	<p>Sitting down with both legs out in front.</p> <p>Bend both legs and adjust so the soles of both feet are touching each other</p> <p>Rest the elbows on the inside of the corresponding</p>	<p>move slowly in and out of the stretch</p> <p>maintain breathing throughout stretch</p> <p>try to keep the core tight and the back</p>	<p>to modify the stretch keep the soles of the feet on the ground</p> <p>To advance the stretch slowly and gently bend at the hips to lower the torso toward</p>
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			<p>knee.</p> <p>Gently push outward with the elbow</p> <p>Push to the point of tension and hold for 30 seconds</p>	<p>straight</p> <p>avoid rocking forwards or backwards</p>	<p>the floor</p>

Hip stretch	Outside of upper leg	Abductors	<p>Sitting with both legs out in front.</p> <p>Bend the right leg and bring across the left leg, with the sole of the right resting on the floor outside the left knee</p> <p>Hug the right leg toward the torso</p> <p>Hold the stretch for 30 seconds and repeat with the left leg.</p>	<p>Do not over rotate the upper body</p> <p>Keep breathing throughout the stretch</p>	<p>To modify the stretch place the bent leg further down the leg toward the ankle</p> <p>To progress the stretches gently twist the upper body towards the bent knee and put the left arm outside the right thigh.</p>

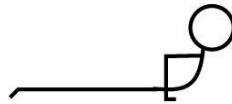
Cat stretch	Lower back	Erector spinae	Start on knees and hands, with arms	Neck and shoulders	Do not round the spine
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			<p>shoulder width apart.</p> <p>Torso should be parallel to the ground and knees slightly apart.</p> <p>Bring the naval toward the spine.</p> <p>Round the spine, keeping the hips lifted</p> <p>Hold for 30 seconds</p>	<p>should be relaxed</p> <p>Keep breathing controlled and regular</p>	<p>To feel a greater stretch push hands and knees into the floor</p>
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Cobra stretch	Core	Rectus abdominis	<p>Lie stomach down with legs extended.</p> <p>Rest elbows and arms on the floor with hands above the shoulders and elbows at 90°.</p> <p>Push the upper body away from the ground until arms are extended and keeping hip on the floor.</p> <p>Keep head in neutral and look forward.</p> <p>Hold for 20</p>	<p>Shoulders should be relaxed</p> <p>Don't over extend the neck</p>	<p>To modify the stretch only raise up until your resting on forearms</p> <p>To deepen the stretch slowly tilt the head back</p>
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seconds



Trapezius and rhomboids stretch

Upper back

Trapezius and rhomboids

Begin in a comfortable sitting position

Bring your two hands out in front of you, one hand over the other.

Push both hands out from your body until a pull is found in the upper back.

Hold for 30 seconds.

Ensure you do not interlink your fingers.

Keep breathing slow and controlled throughout



Chest stretch

Chest

Pectorals major

Begin in a comfortable sitting position

Join your two hands behind your back, have one hand over the other.

Push your chest out and hands

Ensure you do not interlink your fingers.

Keep breathing slow and controlled throughout

away from the body.

When there is stretch found across the chest hold for 30 seconds.



Shoulders stretch

Shoulders
Deltoids

Begin in a comfortable sitting position

Place right hand at the top of back, just between both shoulder blades.

With the left hand push lightly on the right elbow.

A slight pull at the shoulders and shoulder blades should be felt

Hold for 30 seconds. Repeat procedure for left side

During the stretch to keep head in neutral.

keep breathing regular



Triceps stretch

Back of upper arm

Triceps

Begin in a comfortable sitting position

Hold your right hand across your chest.

Bring your left up and just above the elbow pulling the right arm slightly closer to the body.

A slight stretch should be felt at the back of the right arm.

Hold for 30 seconds. Repeat procedure with left arm.

Palm of the hand should be parallel to the ground.

Keep breathing slow and controlled throughout





Neuromuscular Exercises

Yoga is a perfect form of neuromuscular exercise and attending a class at least once a week is recommended and practicing technique outside a class helps also.

Agility, balance and co-ordination are often left out of exercise routines but it is important to include them since when they are utilised they build a foundation for these skills later in life and can contribute to an all-round better performance and can decrease the risk of falling and other injuries associated with a balance deficit.

Agility – ladders, hurdles, Cones, evasion and simple changing of movements

Balance – yoga can help with this but also other movement patterns such as weight shifts, single leg stances, and single leg stances with movement.

Co- ordination – single leg stance with ball toss (standing on one leg throw ball against wall or to a partner), Contralateral (marching right hand to left leg, left hand to right leg) and ipsilateral (marching right hand to right leg, left hand to left leg) marching, Walk, toss and catch (with a ball and a partner – walk, bounce pass the ball and catch – repeat), Squats with vocal point challenges (focusing on different objects), Reaction step ups (reacting to instruction).



Children and young people (aged 2 –18)	All children and young people should be active, at a moderate to vigorous level, for at least 60 minutes every day . Include muscle-strengthening, flexibility and bone-strengthening exercises 3 times a week.
Adults (aged 18–64)	At least 30 minutes a day of moderate activity on 5 days a week (or 150 minutes a week).
Older people (aged 65 +)	At least 30 minutes a day of moderate intensity activity on five days a week, or 150 minutes a week. Focus on aerobic activity, muscle-strengthening and balance.
Adults with disabilities	Be as active as your ability allows. Aim to meet adult guidelines of at least 30 minutes of moderate-intensity activity on 5 days a week.

Physical activity

Guidelines for Adults (19–64 YEARS)

1. Adults should aim to be active daily. Over a week, activity should add up to at least 150 minutes (2½ hours) of moderate intensity activity in bouts of 10 minutes or more – one way to approach this is to do 30 minutes on at least 5 days a week.
2. Alternatively, comparable benefits can be achieved through 75 minutes of vigorous intensity activity spread across the week or combinations of moderate and vigorous intensity activity.
3. Adults should also undertake physical activity to improve muscle strength on at least two days a week.
4. All adults should minimise the amount of time spent being sedentary (sitting) for extended periods.

Examples of physical activity that meet the guidelines

Moderate intensity physical activities will cause adults to get warmer and breathe harder and their hearts to beat faster, but they should still be able to carry on a conversation. Examples include:

- Brisk walking
- Cycling

Vigorous intensity physical activities will cause adults to get warmer and breathe much harder and their hearts to beat rapidly, making it more difficult to carry on a conversation. Examples include:



- Running
- Sports such as Gaelic football

Physical activities that strengthen muscles involve using body weight or working against a resistance. This should involve using all the major muscle groups. Examples include:

- Exercising with weights
- Carrying or moving heavy loads such as groceries

Minimising sedentary behaviour may include:

- Reducing time spent watching TV, using the computer or playing video games
- Taking regular breaks at work
- Breaking up sedentary time such as swapping a long bus or car journey for walking part of the way

What are the benefits of being active daily?

- Reduces risk of a range of diseases, e.g. coronary heart disease, stroke, type 2 diabetes
- Helps maintain a healthy weight
- Helps maintain ability to perform everyday tasks with ease
- Improves self-esteem
- Reduces symptoms of depression and anxiety

(Healthy Ireland, 2018)

- * **Disclaimer:** All the information in this booklet is accurate and correct as of 14/5/18. This is only a guide for basic fitness and complies with the recommendations set out by ACSM. For better results across a range of fitness components, to focus on one area in particular or to get a programme tailored specifically for you contact a registered personal trainer or fitness instructor. Find the list of registered personal trainers in your locality here => <http://www.repsireland.ie/index.cfm/page/members-list>. A tailored training program may also focus on more specific aspects of exercise such as – power, speed and reaction time



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