



CELTIC ADVANCED LIFE SCIENCE
INNOVATION NETWORK
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WORKPLACE WELLBEING



Moving More Workplace Wellbeing

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Information, resources, and links included in this booklet were correct at time of production (March 2023) but may change over time.

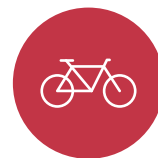


Key definitions



Health:

A state of complete physical, mental and social wellbeing, and not merely the absence of disease or infirmity (World Health Organisation, 1946)



Physical activity:

Any body movement involving muscle contractions that increase energy expenditure (Howley, 2001)



Exercise:

A structured, planned and repetitive activity aimed at improving physical fitness (Howley, 2001)



Physical fitness:

Attributes (aerobic capacity, strength, flexibility, neuromuscular co-ordination) that enable one to perform physical activity and exercise (Howley, 2001)

Reference:

World Health Organisation, 1946: who.int/about/governance/constitution

Howley, 2001: journals.lww.com/acsm-msse/Fulltext/2001/06001/Type_of_activity_resistance_aerobic_and_leisure.5.aspx



Current levels of physical activity (in England)

Inactive

(Less than an average of **30 minutes** a week)

26% of people (11.9m) did less than an average of 30 minutes a week

Fairly active

(An average of **30-149 minutes** a week)

11% (5.1m) were fairly active but didn't reach an average of 150 minutes a week

Active

(An average of **150+ minutes** a week)

63% (29.1m) did an average of 150 minutes or more a week

Accessed from:

sportengland.org/know-your-audience/data/active-lives



Physical activity for health - why is it important?

Non-communicable diseases are those that are not mainly caused by acute infection and result in long-term health consequences (e.g. cardiovascular disease, diabetes, cancer, chronic lung illness).

Non-communicable diseases are now the major cause of death in all societies.

Cardiovascular disease is a group of disorders of the health and blood vessels. Cardiovascular disease is a leading cause of death in the UK, accounting for a quarter of all deaths. 340,000 people in Wales are living with cardiovascular disease.

An example of the impact of physical activity on cardiovascular diseases is in a classic study from 1953.

The researchers found that bus conductors had 30% lower risk than bus drivers of cardiovascular disease (heart attacks, angina, death from heart disease).

Attributed to climbing and descending 500 to 750 steps per day.

Reference: Morris et al, 1953: pubmed.ncbi.nlm.nih.gov/13110049

Workplaces are ideally placed to promote physical activity

- Physical activity improves both physical and mental wellbeing
- Adults spend 60% of their daily hours in the workplace

This makes the workplace an ideal opportunity to promote physical activity



Physical activity – what is workplace productivity?

Workplace productivity takes into account how efficient your workforce is, which can sometimes be measured by the number of goods they produce or services they provide in a given time.

It is often measured as a combination of:

Absenteeism: time off work, which may be due to illness.

Presenteeism: time at work but with reduced productivity, which may be due to illness, stress or other issues.





Physical activity – benefits for workplace productivity

Physically active workers and productivity:

- More physically active people have lower absenteeism
 - More vigorous physical activity led to less sick leave – equating to 4.1 days over 6 months (Proper et al., 2006; [dx.doi.org/10.1136/bjsm.2005.022327](https://doi.org/10.1136/bjsm.2005.022327)).
 - More physically active people had lower absenteeism in 11 out of 15 papers studied in a review (Kerner et al., 2017; doi.org/10.1515/aiht-2017-68-2963).
- More physically active people have lower presenteeism
 - People meeting physical activity guidelines had more than 7% higher job performance (Hunter et al., 2021; doi.org/10.3390/ijerph182312563).

Taking part in endurance and muscle strengthening activities have been shown to reduce absenteeism and presenteeism (Walker et al., 2017; doi.org/10.1123/jpah.2016-0696). Muscle strengthening activities are often more enjoyable so this may be a more attractive form of exercise to some people. Enjoyment of activity and being able to stick with the activity is the most important factor.

Promoting physical activity and productivity:

- When we actively promote physical activity in the workplace we see reduced absenteeism and presenteeism
 - People meeting the guidelines for exercise had 74% less absenteeism per week than those in the lowest exercise group (Losina, 2017; doi.org/10.1371/journal.pone.0176872)
 - People receiving an exercise intervention had a 4% increase in workability (reduced presenteeism) and a 9% increase in general health (Justesen et al., 2017; doi.org/10.1097/JOM.0000000000001101)
 - In manual workers a strength training programme increased work ability and reduced chronic pain (Sundstrup, 2014; doi.org/10.5271/sjweh.3419)



Physical activity – does promoting physical activity lead to financial returns?

Physical activity promotion interventions are proposed to produce financial savings for companies through reduced absenteeism cost, presenteeism cost and medical costs.

However, the literature on promoting physical activity and financial returns for companies is limited so we cannot state for definite that a financial benefit will be realised.



References:

Nguyen et al. 2022, Preventive Medicine; Dongen et al. 2011, Obesity reviews, 12

Recommended guidelines for physical activity

Weekly recommended activity



At least **150 - 300** minutes **moderate intensity** aerobic physical activity or **75 - 150** minutes **vigorous intensity** aerobic physical activity or an equivalent combination throughout the week



At least **two days** of **muscle strengthening activities** at moderate or greater intensity that **involve all major muscle groups**.

For additional health benefits:



More than 300 minutes of **moderate intensity** aerobic physical activity or **more than 150** minutes of **vigorous intensity** aerobic physical activity or an equivalent combination throughout the week

Reference:

WHO 2020 ([who.int/news-room/fact-sheets/detail/physical-activity](https://www.who.int/news-room/fact-sheets/detail/physical-activity))

UK government 2022 ([gov.uk/government/collections/physical-activity-guidelines](https://www.gov.uk/government/collections/physical-activity-guidelines))



Relationship between physical activity & mortality risk

Anything is better than nothing!

Any amount of physical activity has some health benefits – like taking the stairs at work. Even a small increase in activity in someone who is inactive leads to large benefits. See figure below.

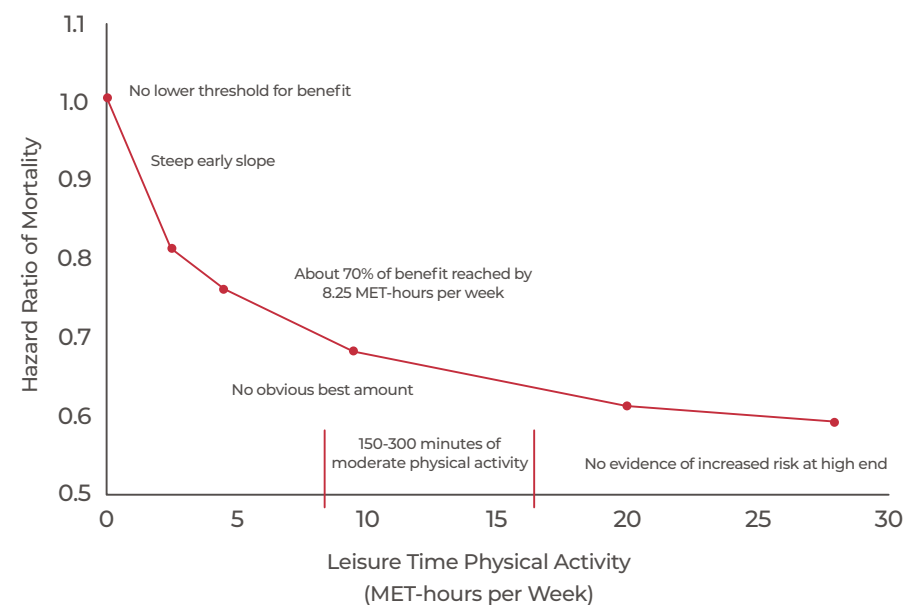


Figure from:

US dept of Health and Human Services (health.gov/our-work/nutrition-physical-activity/physical-activity-guidelines/current-guidelines)



Screening: 2021 PAR-Q+

You can use the PAR-Q+ to reduce concerns about risks associated with exercising without adding a barrier to participation.

However, if you remain unsure whether it is safe for you or your colleagues to exercise, consult an exercise professional or your GP.

Link: [eparmedx.com](https://www.eparmedx.com)





Supporting your colleagues to be more active

The GPPAQ provides an example of how a Doctor would structure a motivational interview to promote physical activity. You can use a similar structure to guide conversations with your colleagues. See Annex 2 of the guidance here:

[gov.uk/government/publications/general-practice-physical-activity-questionnaire-gppaq](https://www.gov.uk/government/publications/general-practice-physical-activity-questionnaire-gppaq)

Motivational Interviewing elicits change talk in your colleague, empowering them to change their own behaviour. Below are example questions for a motivational-based dialogue.

Question set 1:

“On a scale from 0 to 10, where 0 is not important at all, and 10 is extremely important, how important is getting more active for you?”

“Why did you pick this number?”

“Why did you not pick a lower number?”

“What would you need to do to get you to a higher number?”

Question set 2:

“Now think about why you want to do this. Think about how you’ll feel, what you’ll look like, what you’ll be able to do that you can’t do now. Also think about what might be stopping you from changing and what will happen if you don’t?”

Why you want to change

e.g. To be able to play with children / grandchildren; To help health

What will happen if you change e.g. more energy, less lonely, control condition

Why you don’t want to change e.g. low confidence, don’t think will enjoy it

What will happen if you don’t e.g. condition will get worse, feel bad about self, not be able to play with children/grandchildren

Question set 3:

“If you were to decide to increase your physical activity, how confident are you that you would succeed? If, on a scale of 0 to 10, 0 means that you are not at all confident and 10 means that you are 100% confident you could become more active. What number would you give yourself?”

- Why did you pick this number on the scale?
- Why did you not pick a lower number?
- What would you need to do to get a higher number?

All the while you're trying elicit change talk from them and reaffirm these statements back to your colleague.

Finally, provide your colleague with a brief summary of what you heard and then ask: ***“What do you think the next step is for you?”***

A common response is for them to say they don't know or are uncertain. If they do, follow with,

“Let's list what the options are at the moment.

You could stay as you are and do nothing;

Start to increase the amount of physical activity that you do”

- Go through their day with them, and talk about when activity could be built in e.g. getting off the bus a stop early, joining in a health walk or walking the children to school.
- Also talk about what activities might be of interest to them, signpost to local activities from gardening to dance to football.
- Ask them what they make of these opportunities?

If interested talk to them about appropriate levels of activity and how to build up their activity levels. If someone hasn't been active for a long time going straight into vigorous activity isn't a good idea, advise them to build up their activity levels and intensity gradually.

Encourage them to set a specific goal such as:

“I will go for a walk on Tuesday at lunchtime at the park for thirty minutes. If I can't make it then I will go on Wednesday.”

In just a few minutes, it is possible to encourage your colleague to consider why and how they might change their physical activity without feeling as if they are being pushed or coerced into something they are not ready for.

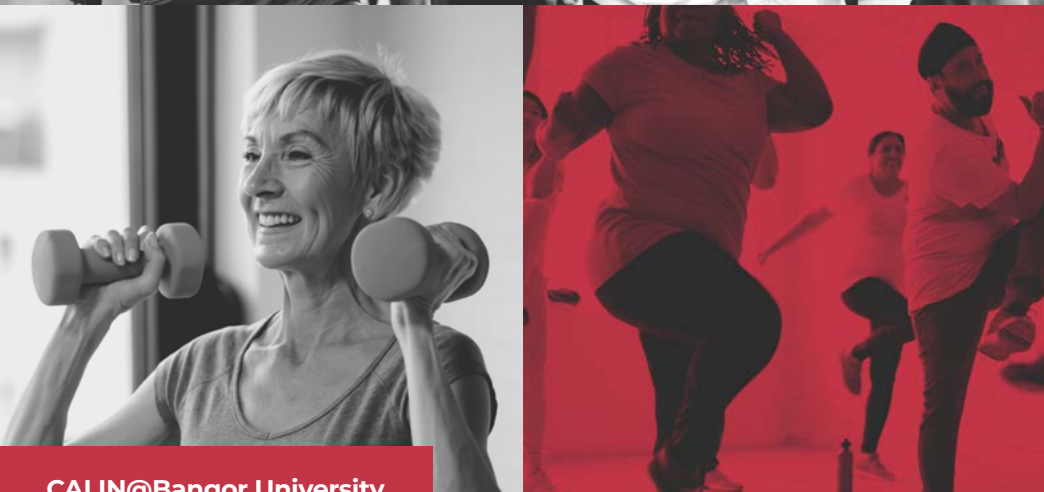
Other practical recommendations include:

- Providing smart watches
- Allocating time to going for a walk or similar during the working day
- Train employees to become exercise champions (e.g., by having conversations like the examples above)
- Physical work environment changes such as sit-to-stand desks.

But remember:

- People may not feel comfortable talking about their goals in work, it should be entirely their choice to participate.
- Try not to focus on body weight or anything that relates to body image etc (unless that is the participant's own goal). Remember, increasing physical activity can reduce risk of cardiovascular disease regardless of whether body mass changes!
- Give people the opportunity to get involved rather than telling people what to do.





About CALIN

The Celtic Advanced Life Science Innovation Network (CALIN) connects business, academia and healthcare with experts from six leading universities across Ireland and Wales. It offers enterprises the opportunity to engage with leaders in health and wellbeing, advanced medical and pharmaceutical science, nanotechnology and biotechnology. The network provides access to technology, scientific expertise, and a network of life science innovators to support the development of products, processes and services.

Bangor University leads on the health and wellbeing theme for CALIN and looks to support small to medium enterprises (SMEs) working in the life sciences or health and wellbeing fields.

Find out more calin.wales

Contact us calin@bangor.ac.uk

