



# Interoception and self-regulation



Get ready to learn



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Student Wellbeing Hub



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The information provided in this document was accurate and correct at the time of development.

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# 1. Interoception and self-regulation

## Self-regulation

Self-regulation is the ability to moderate or control emotions and actions in order to function effectively and get along with others. In the classroom, self-regulation supports students to engage in learning activities, participate in social interactions and minimise disruptive behaviour. There are many complex factors which influence our ability to self-regulate including sensory processing, emotional development, cognitive development, socioeconomic circumstances, and our environment.

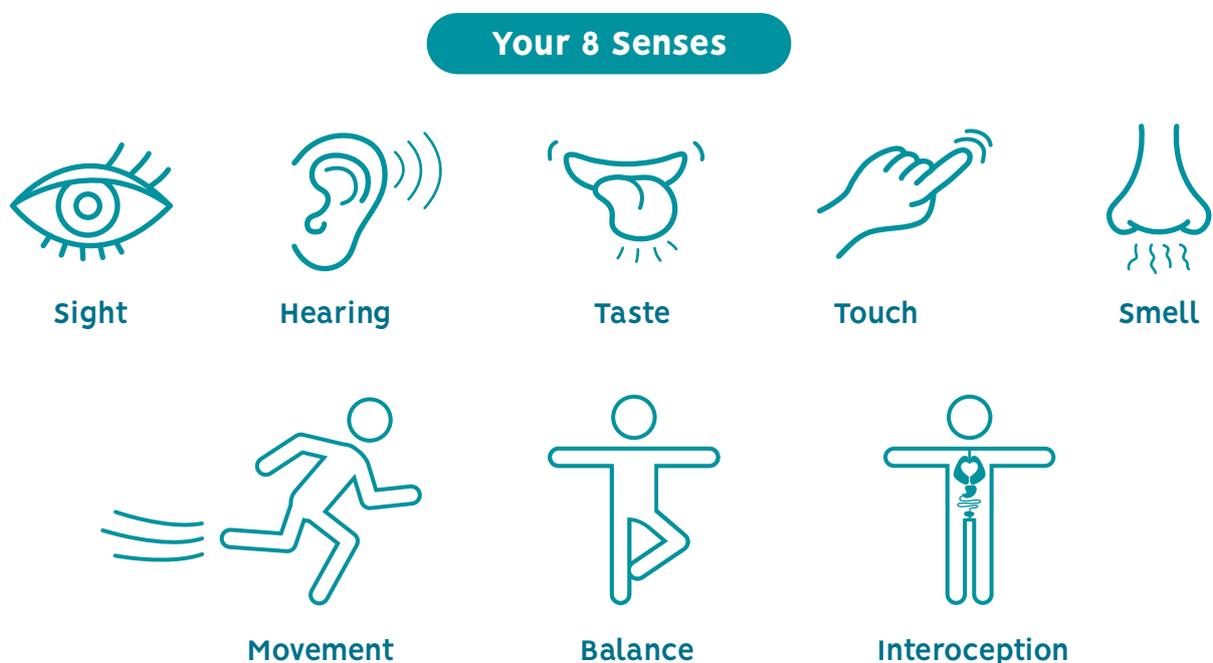
## Self-management

Self-management is the ability to manage your behaviours and actions to support your body being in balance (homeostasis). This balance could be biological (such as eating, drinking and voiding waste) or situational (such as managing stress in different environments).

## Interoception

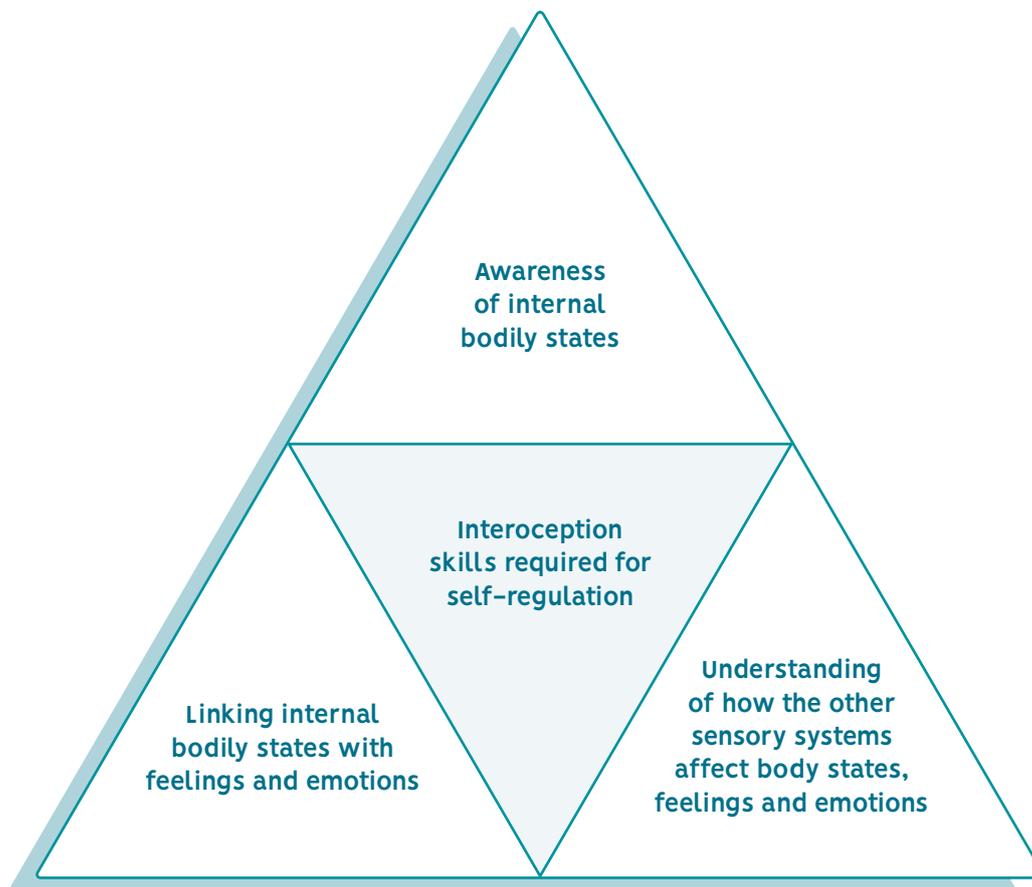
Interoception is thought to be a precursor for self-regulation. It can be thought of as 'mindful body awareness' and is one of our eight sensory systems. Rather than being an external sense (like sight or hearing), interoception is the perception, recognition and understanding of the internal physical states of the body. These body signals can be understood as emotions and/or feelings which can then be responded to.

For example, someone who is skilled in interoception can tell when their heartbeat is signalling fear versus excitement. This is because they can notice and recognise all the other internal bodily signals they are experiencing which help them to process and respond to their overall emotional state.



Interoception skills are required for a range of functions such as knowing when to go to the toilet, being aware of the physical signs that you are becoming angry or upset and managing your emotions proactively.

Interoception can also help us to understand how the information we process through our external senses can have an impact on our internal body states, feelings and emotions. For example, hearing loud noises might make your heart rate quicken or your muscles tense. As interoception is a sensory system, these responses to external stimuli are not necessarily cognitive and might happen automatically.



## Interoception and social-emotional skills

Everyday observations of your students will give you an indication if your students have low levels of interoceptive awareness or accuracy. When students have not yet developed interoception skills they may struggle not only with their own emotions but with social interactions. Even just being around others may be difficult for them to manage.

If someone's interoceptive awareness is still developing, they will not notice or understand what their body is telling them. This means they may start to escalate emotionally as a result of internal or external contextual factors, but not notice this escalation and not know they need to make decisions to manage this. As individuals start to develop interoceptive awareness, they will begin to feel their emotions before they are too big and take control of their brain functions. Once aware, they can take actions to decrease the intensity of their emotions, or at least prevent them from escalating. This can prevent emotional overload and avoid someone entering survival mode. Survival mode may sometimes be described as 'shutdown' or 'meltdown', and can occur more frequently when a young person has poor interoception.

Goleman (1995) suggested that emotional intelligence, sometimes known as social intelligence, is composed of three skill sets: emotional skills, cognitive skills and behavioural skills. When these theories are looked at in conjunction with metacognition, that is, thinking about thinking (Moses & Baird, 1999; Wellman 1985), the key role of interoception can be identified. Without interoception, it is not possible for students to develop metacognitive abilities. The following table illustrates the links between metacognition, social-emotional intelligence and interoception.

Metacognition (Wellman, 1985)	Emotional skills	Cognitive skills	Behaviour skills	Interoception (mindful body awareness)
1. Knowledge that mental states exist	Labelling feelings	Self-talk	Non-verbal communication	Noticing internal body states
2. Knowledge that there are distinct mental processes	Expressing feelings	Understanding social cues and how others perceive you	Effective verbal communication	Recognising and naming internal body states
3. Knowledge that these distinct processes are a function of cognition	Recognising and naming internal body states Identifying feelings as responses to stimuli	Being able to problem solve in response to impulses and anticipating consequences	Control of impulses	Understanding the link between internal body states and feelings/emotions
4. Knowledge that cognition is influenced by context (internal and external)	Understanding and responding to intensity of feelings	Understanding the perspectives of others and societal norms		Understanding the effects of others and the wider environment on self, internal body states and feelings/emotions
5. Being able to self-assess cognitive process to direct personal behaviour	Emotional self-regulation	Self-awareness	Behavioural self-regulation	a. Managing responses of internal body states to external stimuli b. Socio-emotional self-regulation

Emotional skills, cognitive skills and behaviour skills as per Goleman's (1995) emotional intelligence as foundation to social-emotional skills.

## About this resource

This resource provides 39 activities to help students develop their interoceptive awareness. The activities have been researched and shown to be effective for both autistic and non-autistic students, when used as a whole school support where whole classes use the activities two to three times a day. In addition, small groups or individuals may use activities as needed to support co-regulation and calming. They might also be useful for parents to explore with their children at home.

The activities are suitable for students of all ages and are presented in multiple formats (instructional illustrations; demonstration videos) so that you can discover the best method for you and your students.

It should be noted that care needs to be taken when practising these activities with students who have complex trauma, as focusing on certain body parts can potentially be a triggering experience. In this instance, activities such as these are best done in a therapeutic environment.

## Benefits of interoception activities

Interoceptive skills are beneficial for all students to practise and use. Research by Dr Emma Goodall found that, with regular implementation of interoceptive activities, individuals are better able to self-regulate their emotions, exhibit less off-task behaviour, and engage in more kind and considerate behaviours. With higher levels of engagement in learning and lower levels of difficult situations in classrooms, interoception can contribute to the wellbeing of both the student and the school environment.

Mindfulness has long been known to help improve the wellbeing of many who practise it, and it has also been found to help reduce experience of depression and anxiety and improve self-compassion and compassion for others when practised by people with disability (Idusohan-Molzer et al, 2015). In a pilot study, researchers from the [Center for Investigating Healthy Minds](#) (CIHM) at the Waisman Center (University of Wisconsin-Madison) taught mindfulness to teachers and students in the Madison Metropolitan School District. Students in the research group reported 'feeling more in control and responsible for their actions, made fewer errors, and improved in their use of strategy on a problem-solving task involving working memory. Additionally, teachers observed improved emotion regulation in these students after the training.' CIHM also looked at preschools and teaching kindness and compassion through mindfulness. The research has been published indicating that these students showed greater improvements in social competence as well as higher levels of learning, health and social-emotional development, whereas the control group exhibited more selfish behaviour over time (Flook et al, 2015).

In schools it can be helpful for each student to keep a record of their developing body awareness using either visual or written records. In this way, students who need extra support to self-regulate can easily see what areas require further development. Self-awareness on the interoceptive level is a prerequisite for accurate self-awareness of self in terms of strengths, abilities and support needs in the long term.

## 2. Interoception and the autism spectrum

Research confirms the neurological basis for many differences inherent in the autistic spectrum (Lovett, 2005). Students on the autistic spectrum may find it helpful to understand the internal processing and response to external stimuli differences between autistic spectrum brains and non-autistic spectrum brains. An overview of the differences between autistic spectrum and non-autistic spectrum brains is given below (adapted from Baker-Ericzen, 2013; Lovett, 2005).

Autistic spectrum brain	Non-autistic spectrum brain
<ul style="list-style-type: none"><li>• Thinks about the details</li><li>• Perceives information independent of context</li><li>• Logic/cognition focused</li><li>• Enjoyment of known/preferred experiences/ideas</li><li>• Focus on self and preferred people, objects, places, experiences</li><li>• Concrete, logical thinker</li><li>• Literal interpretation and use of language</li></ul>	<ul style="list-style-type: none"><li>• Thinks about the big picture</li><li>• Perceives the context of information as well as the information</li><li>• Feeling/emotion focused</li><li>• Enjoyment of new/novel experiences and ideas</li><li>• Enjoyment of and focus on social interactions</li><li>• Abstract, emotional thinker</li><li>• Social and contextual use of and interpretation of language</li></ul>

These differences are a continuum, and non-autistic students may have some of the traits of the autism spectrum or be able to learn to think in some of those ways and vice versa. No one way of thinking or being is superior to another.

Refer to the [Positive Partnerships](#) website for further information and resources.

### 3. Teaching interoception to improve self-regulation

There are numerous benefits for teaching interoception skills to students in schools, including the following.

- To help students understand how their internal body states are linked to their emotions.
- It is a prerequisite skill for self-management and self-regulation. It provides students with the tools to know when they are developing emotional reactions.
- Without interoception, social skills are just the application of rules and not a meaningful way of interacting – it enables students to develop a sense of belonging.
- Classrooms where interoception is being taught have decreasing behavioural challenges over the school year, whereas classrooms where it is not taught have static or increasing behavioural challenges (*school wide behaviour reporting analysis*).

Research by Goodall (2021) indicates increasing interoceptive awareness:

#### Within 8 to 10 weeks

- decreases heart rate during the interoception activity
- decreases externalising challenging behaviours
- increases engagement in learning
- increases prosocial behaviours – kindness, helpfulness, connections to others.

#### More than 16 weeks

- decrease stress
- can help manage anxiety
- promotes caring and empathy.

### 4. Developing interoception

Students can learn a range of appropriate responses once they are able to notice and recognise internal signals.

#### Visual and verbal prompts

Where students and young people are still developing interoceptive skills, visual or verbal prompts can be effective support tools. Below is a table with some examples of visual and verbal prompts and the rationale for their use. It is suggested these prompts are introduced as whole-class strategies, so as not to single out individual students.

Issue	Example visual prompts	Example verbal prompts	Rationale and use
Still developing bladder/bowel control	Toilet icon placed in visual timetable at regular intervals (placing to be agreed with family and student).	Verbal reminder to go to the toilet when student is observed with body language that the family have indicated shows they are about to go to the toilet.	Toileting accidents can be embarrassing for some students, other students can be very unkind following these and it is important to ensure the use of respect at all times and to be very aware of how others are reacting. NB – for some bladder/ bowel control is not possible due to physical difficulties.
Still developing awareness of thirst	Water bottles to be kept on desks or easily accessible in classroom. Photo of the student drinking from their water bottle to be either timetabled regularly or to be presented when they lose focus on tasks.	'Have a drink.' 'Remember how we learnt that drinking water helps your brain to focus, have a drink break and then go back to work.'	Hydration is vital for good focus, physical health and avoiding headaches. Students may not be able to adequately track their hydration. A simple way to teach this ability to track hydration is the colour of urine, which becomes more concentrated and darker in colour as someone become more dehydrated. Refer to the <a href="#">hydration chart</a> .
Still developing awareness of hunger	Fruit snack visual Snack visual Listen to story and eat visual	'What would you like to eat from your lunch box?' (asked while offering lunch box) 'You seem hungry, have a snack' (if exhibiting sign described by family)	Hunger can make people agitated, easily angered or aggressive. Stable blood sugar levels help maintain stable moods. As each person is different some students may need small frequent snacks, while others prefer to eat less frequently. Free access to food with visual or verbal prompting is the ideal to maximise focus and concentration throughout the day.
Does not yet recognise when getting angry or very upset	Choice board with two or three known calming activities to be presented when signs of anger are appearing. 5 point scale not to be used when the child becomes distressed or withdraws. Refer <a href="#">regulation scale</a> .	'I notice you seem to be getting angry, have a drink of water then come and let me know what the problem is.' (enables calming prior to explanation which would otherwise cause more heightening) 'Could you please ...' (where ... is a known calming activity)	Students who do not yet recognise when they are getting angry can use their bodies and/or voices in ways that challenge the people around them. At the point of distress, these strategies are too late and the student must be allowed to calm down before being spoken to. One visual can be presented during a time of distress that directs them to their safe or calming space or activity.
Uses very loud voice	'Noise-o-meter' Whisper visual Silence visual Talking visual Loud voice visual – displayed by student in front of them on their workspace as appropriate.	Using a <b>very quiet</b> voice, request the student 'please talk more quietly' or 'not so loud please'.	Some students cannot hear how loud their own voices are and/or use their voice to cover up other sounds that they find distressing/painful. Others may use loud vocalisations to signal distress in which case the <b>distress</b> must be responded to and not the loud voice.

## Responding to external sensory input

Until students have better developed interoception skills, teaching them how to respond to feelings, emotions and external stimuli may prove difficult, and therefore make it harder to support students effectively through these feelings.

A student who hastily leaves the classroom may well be reacting to external sensory input that they find extremely distressing, but without an awareness of what being distressed 'feels like'. Without an understanding of this, they are unable to recognise distress, and therefore may not actually realise that that sensory input is problematic for them.

Once a student has the ability to recognise and understand their internal body signals for distress, they can begin to work out what causes distress for them and how to respond to these stressors. The adults around them may well have a good idea of what they are feeling and why, but without learning it for themselves the student will never be able to learn to self-regulate independently. If you are unsure of the level of interoception of a particular student it will be easiest to start off with activities that help them to gain an awareness of their bodily reactions (internal signals) to noise and to heat and cold (for more, refer to the [interoception support plan](#)).

## Responding to noise

Start with some mindful listening activities, suitable for the students that you are working with. Mindful listening is where the students stop all other activities and focus on actively listening to something or someone with the goal of hearing as much as they can. See below for some ideas of things to listen 'to' and 'for'.

Listen TO	Listen FOR
Music from <i>The sorcerer's apprentice</i>	Which instruments they can hear
The general classroom or playground environment	Natural and created sounds
A poem or short story	Language rhythms and rhymes, number of words
Special effects, e.g. from <a href="http://www.acoustica.com/sounds.htm">http://www.acoustica.com/sounds.htm</a>	Different sounds
Recordings of different environments	Natural and created sounds to try and identify the soundscape (place)
Contemporary music at different volumes	Instruments, voices, pitch, tone

Once the students have developed their active listening skills, these mindful listening activities can be followed up with questions relating to how different body parts feel or respond when exposed to different sounds. For students with strong physical or emotional reactions to some sounds, the aim is to try to help them identify what sounds trigger what reactions so together you can develop a plan to minimise stress, distress and anxiety while responding in a safe and effective manner when they hear any triggering sounds.

Existing strategies for responding to noise might include the following:

- making noise to cover other noises
- covering ears with hands
- using headphones
- running or moving away.

Some new complementary strategies to explore might include:

- thinking about the physical placement of students in relation to class noise
- giving pre-warning of known trigger sounds when possible
- using comforting sensory activities to compensate for uncomfortable noise, e.g. using a fidget toy to help distract from class noise (if this is a suitable specific strategy for a student in your class).

Auditory processing is a complex set of processes that is much larger than encompassed in this activity. If educators or families are concerned about a young person's auditory processing, a referral for assessment may be needed.

## Responding to temperature (cold and heat)

Some students may experience strong emotional reactions to changes in temperature. In some instances, becoming hot or cold can lead to distress, anger and even rage in some students, who may not be aware of their temperature reactions themselves. Weather appropriate clothing is one strategy that should be employed, however, this alone may not be sufficient for students with strong emotional reactions. An alternative strategy for these students is to develop a good sense of temperature – both internal and external – to support awareness of temperature change. Note that, due to differences in cognitive ability, it won't be possible for all students to support this level of awareness and they will always rely on adults to help regulate their temperature.

For some people, the temperatures of hands, feet, face and torso may feel quite different. For example, moving up from toes which are so cold they have turned purple, feet may be very cold, but above the ankle may be warmer and the torso quite warm. In other people this is not the case. Temperature regulation is complex and can be affected by many factors. Classroom seating should take temperature sensitivity into consideration, as some students will learn most effectively closer to the air conditioner or heater, while others might find that problematic.

Younger students should be explicitly taught about why and when to wear hats, coats, scarves, summer clothing and the like, while older students may need reminding that it is hot and the sun can damage their skin, so they need to wear a hat, for example.

Some strategies for responding to cold and heat that may already be in use in the classroom include:

- wearing gloves inside
- keeping hand warmers in pockets
- sitting under the air conditioner and setting it to high.

Other possible strategies to explore include:

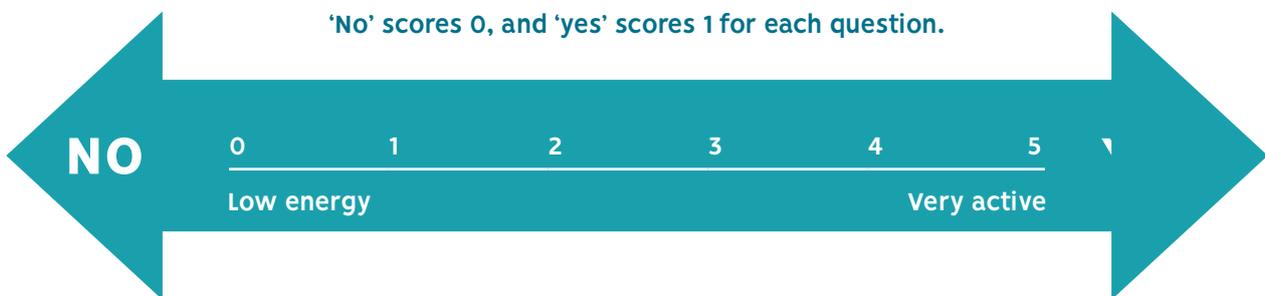
- having an indoor option at recess and lunch
- keeping wet flannels frozen in zip-lock bags for students to hold to cool down.

## Default energy levels

Children and young people may not be aware of their body's need to move or be still. Each student has their own default energy level: some are very high energy or active, while others are more passive or low energy. It is important to help students identify and understand their typical energy level so they can see how their energy levels change and what effect this has on them. Only with an understanding of their own energy levels can students learn how and when to apply strategies to maximise their ability to learn as well as be comfortable in themselves and around others.

Introduce the concept of energy levels by asking some simple questions.

- *I am wondering, do you find it difficult to sit still at your desk or table?*
- *I am wondering, do you struggle to wait patiently for things?*
- *I am wondering, do you have difficulty sitting in the car or bus during long trips?*
- *I am wondering, do you enjoy sports requiring lots of movement, like soccer and bike riding?*
- *During every-day activities, like brushing teeth and getting dressed, do you like to move around rather than stand in one spot?*



### Energy level – mind and body #1

One way to help students identify their perceptions of their default energy levels is to ask them to choose photographs that they think are most like the inside of their brain and most represent their energy levels; these can be selected from [mind and body photos](#) or they may want to bring in their own images. Talking about why they chose those particular images will help model the interaction between expression of self (communication) and awareness of self (interoception).

Repeat this activity when students are energetic and again when they are tired, asking them to choose the photographs that they think are most like the inside of their brain and most represent their energy levels *at this moment in time*. Direct the discussion to enable them to see the changes in their picture choices from default to energetic and tired, as well as to compare and contrast how these states are represented or experienced by their peers.

### Energy level – mind and body #2

Provide the students with their [body outline](#) and/or the [word bank](#) words first thing in the morning, preferably on a cold, wet, dark winter morning or after a long weekend in other seasons. Ask the children and young people to identify some of the descriptors that match how their bodies feel right now. Repeat activity when they are energised and get them to compare and contrast.

The **Learning from home** activities are designed to be used flexibly in a number of ways by teachers, parents and carers, as well as the students themselves.

## Anger

Ask the student to describe how their body feels when they get angry. You may need to help them to identify a time when they were angry to prompt memory of what was happening. Students can do this through drawings or choosing images, or by completing their [body outlines](#) with words from the [word bank](#). This can be done as a whole class, in groups or 1:1, but should **never** be attempted during times of emotional distress or withdrawal.

If you can see a student becoming angry, you could engage in this activity by saying; *'I am noticing that you seem to be getting angry. I am wondering if you can explain how it is your body is letting you know you are angry?'* If they are unable to do this, you can further explain why you think they are angry, what the physical clues are for you.

Below are some physical indicators of anger taken from <https://www.mentalhelp.net/articles/recognizing-anger-signs/>.

- clenching your jaw or grinding your teeth
- headache
- stomach ache
- increased and rapid heart rate
- sweating, especially your palms
- feeling hot in the neck and face
- shaking or trembling
- dizziness
- rubbing your head
- cupping your fist with your other hand
- pacing
- getting sarcastic
- losing your sense of humour
- acting in an abusive or abrasive manner
- raising your voice
- beginning to yell, scream or cry

## Responding to anger with volcano breathing

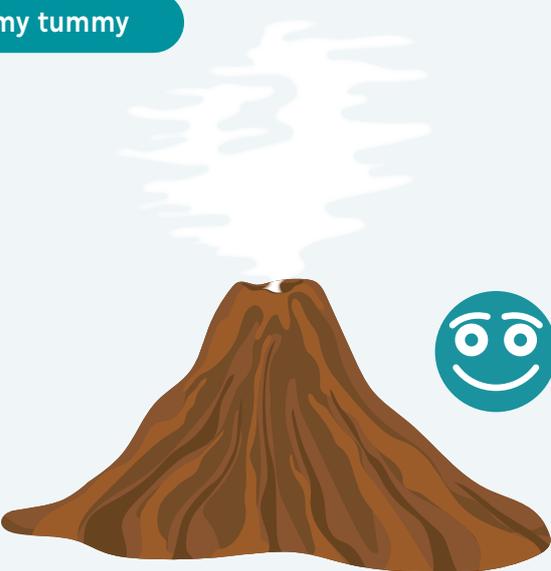
The technique essentially consists of two parts: a story/visual and a breathing exercise. The following example is taken from Goodall (2013), and can be used with students who have big emotional responses as a story to help them understand and identify anger. This text can also be used to make a poster on the wall students can refer to as a reminder of what they can do to self-regulate when they feel angry.

### The volcano in my tummy



When I get angry it feels like there is a volcano in my tummy.

When my volcano erupts my arms and legs go everywhere and my voice gets really loud. It is really dangerous, just like a real volcano.



When I feel like I have a volcano in my tummy, I am going to try to breathe it out so the angry bits just gently go out of me. I just breathe it out gently, slowly, until the feeling passes.

## Hydration

Discuss with students 'how do they know when they are thirsty, what are the body signals?'

These signals could include:

- dry mouth
- fatigue
- headache
- dizziness.

Discuss with students that our urine is a very important way that our body shows our hydration levels.

Ask the students:

- What do you think the colour of urine should be?
- What do you think urine should smell like?

When you are hydrated your urine should be clear and have no smell.

Show students the visual [hydration chart](#) and discuss that we need to ensure that when we are dehydrated we hydrate by drinking water.

## Bristol Stool Chart

Discuss with students: *'How do you know when you are constipated? What does your body tell you?'*

These signals could include:

- passing fewer than 3 stools a week
- having lumpy or hard stools
- straining to have bowel movements.

Discuss and show students the [Bristol Stool Chart](#).

Healthy poo should be smooth and relatively soft (blobs, thin snakes, or soft-serve ice-cream) and formed poo (pellets, logs, and 'thick and bumpy sausage') may indicate signs of constipation.

Dehydration is one of the most common causes of constipation.

The food you eat makes its way from your stomach to the large intestine, or colon. If you don't have enough water in your body already the large intestine will soak up water from your food waste.

## Communicating with families

Schools and pre-schools may wish to inform families how these charts are being used to support learning and behaviour. Charts can also be given to families to support their tracking of hydration and bowel health for discussion with the child or young person's health professional or allied health professional. Note that many variables can impact hydration and bowel health.

# 5. Developing interoceptive awareness in class

Here are some options for how to include activities to develop interoceptive awareness within the classroom.

- Two to three short sessions a day, each session covering one or two activities. Activities are done twice. After completing for the first time, students are asked where they felt the difference or what they felt. Guide students as to where they felt the difference and ask them to focus on that area when the activity is repeated. Sessions are most beneficial after breaks, such as first thing in the morning, after recess or after lunch.
- Multiple short sessions a day, each session covering one or two activities. Activities are done twice. After the first time, students are asked where they felt the difference or what they felt. They are then guided where/what to feel and asked to focus on that for the second time the activity is done. Sessions are after every transition and/or whenever the students require refocusing.
- One or two long sessions a day, each session lasting 15 to 20 minutes. Usually chosen for use in specific classrooms where students arrive dysregulated and struggle all day. Interoception activities are presented as a sequence of movements and actions with directions to focus on specific muscles or other aspects of interoceptive awareness.

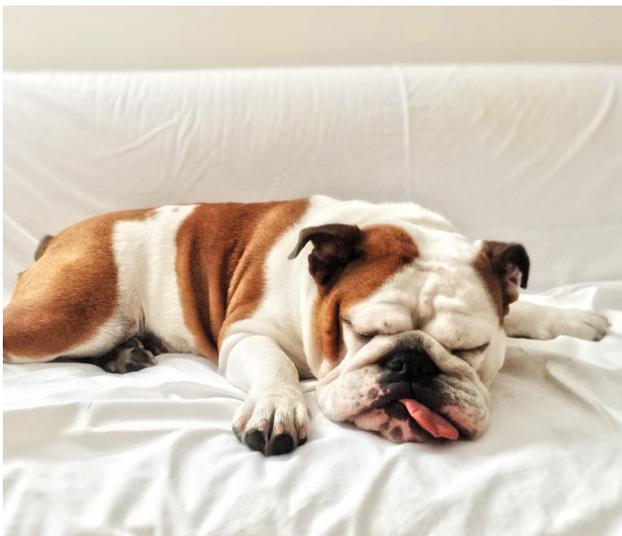
Note that these activities may not always be the most appropriate for supporting your students to refocus. Students may not be focused for a range of sensory, emotional or cognitive reasons. Every child is different, so it's important to have a range of strategies in your toolbox.

# 6. Resources and further information

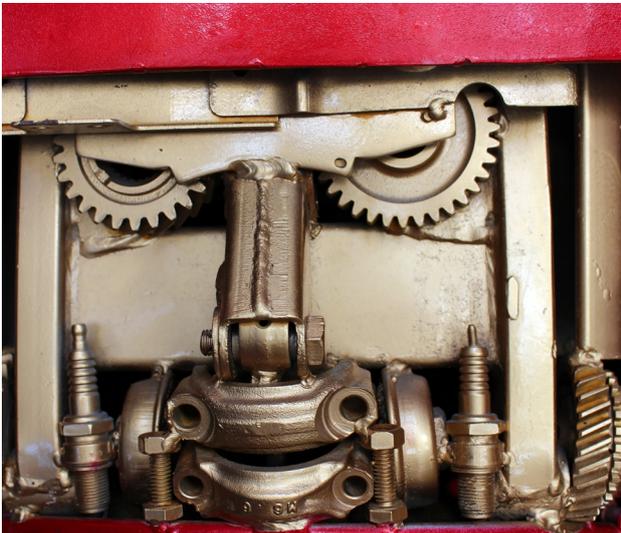
A range of resources and further information – including in-class work sheets, templates, posters, plans and videos – can be found on the [Student Wellbeing Hub](#).

# Appendix 1: Mind and body photos

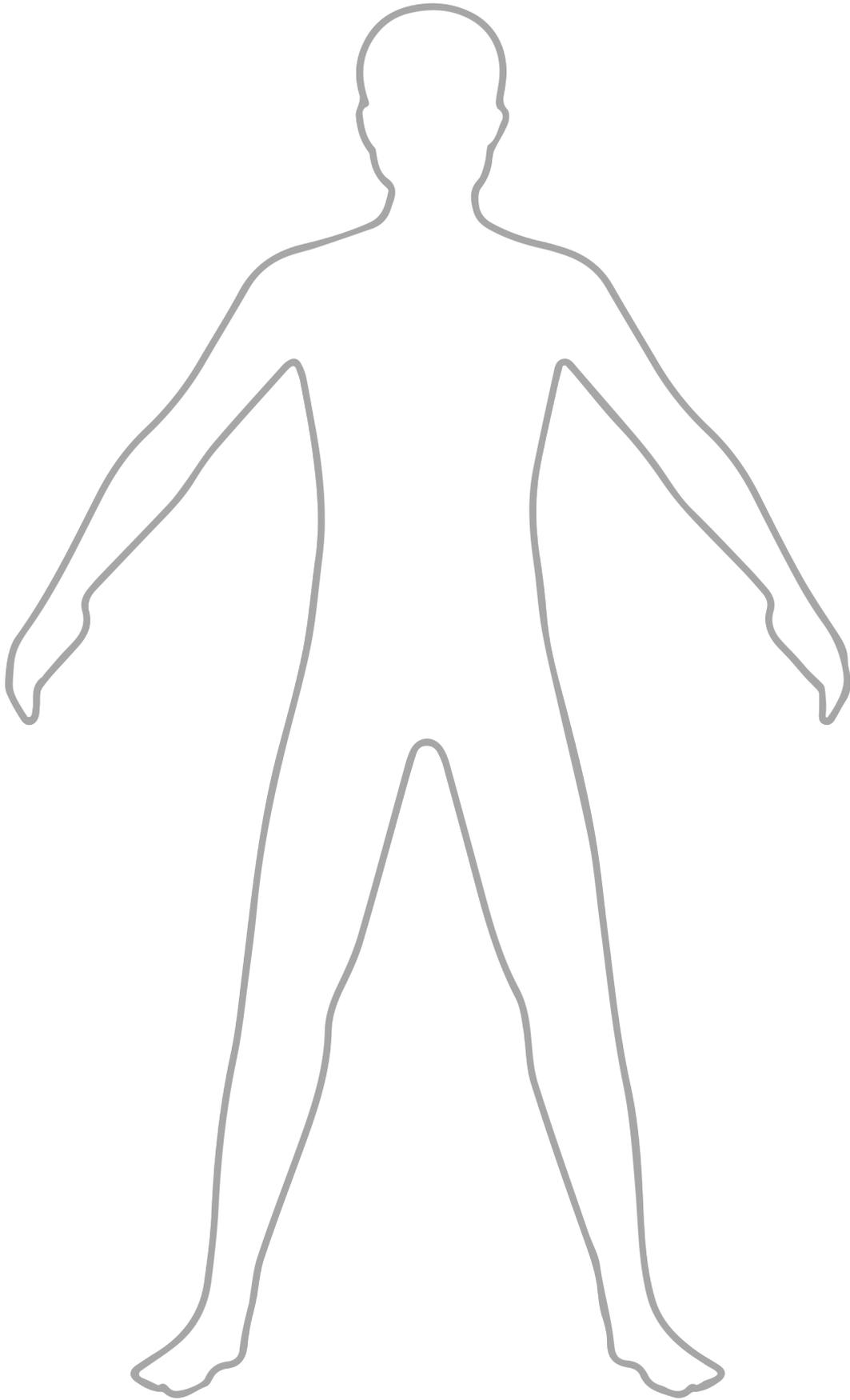
Use these photographs with your students to help them identify how they are feeling in the energy levels of their mind and body. You might like to print out and laminate the pictures to keep them in a box for easy reference in class. You might also like to add to the image bank as you and your students find suitable images.







## Appendix 2: Body outline



## Appendix 3: Body parts word bank and associated adjectives

### Body parts

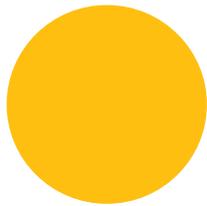
head	forehead	eyebrows
eyes	nose	nostrils
mouth	lips	teeth
tongue	jaw	ears
earlobe	neck	shoulder
ribcage	ribs	diaphragm
arm	elbow	hand
fingers	thumbs	palm
leg	knee	ankle
foot	toes	heel
sole	skin	veins
artery	heart	lungs
throat	stomach	bladder
bowel	breath	voice
muscles	bones	tendons
mind	brain	shin

## Associated adjectives

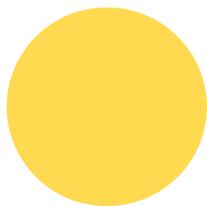
boiling	hot	warm
cool	cold	freezing
stiff	tense	relaxed
tight	loose	floppy
stretched	light	heavy
wet	dry	itchy
runny	busy	cluttered
full	empty	blank
closed	open	still
moving	wiggling	jerking
flapping	fidgeting	twirling
twisting	squeezing	pacing
clenching	shaking	tapping
short	fast	thin
quiet	loud	sore
sweating	sweaty	tired

# Appendix 4: Hydration Chart

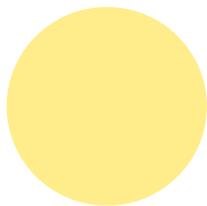
Use this urine colour chart to give yourself an idea of whether you are drinking enough water or if you are dehydrated. Vitamin and multivitamin supplements may change the urine colour, making it bright yellow or discoloured.



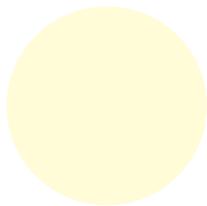
**Extremely dehydrated**  
Drink a large bottle of water.



**Dehydrated**  
Drink 2–3 glasses of water.



**Mildly dehydrated**  
Drink a glass of water.



**Hydrated**  
You are drinking enough. Keep drinking at the same rate.



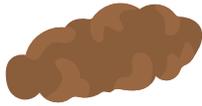
Hydration chart reproduced with permission from Positive Partnerships.

# Appendix 5: Stool Chart



## Type 1

Separate hard lumps (severe constipation).  
Drink more water and seek medical help.



## Type 2

Lumpy and sausage-like (mild constipation).  
Eat more fibre and drink more water.



## Type 3

Sausage shape with cracks (normal).



## Type 4

Like a smooth soft sausage or snake (normal).



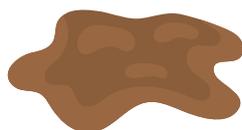
## Type 5

Soft blobs with clear-cut edges (lacking fibre).  
Eat more fibre.



## Type 6

Mushy consistency with ragged edges  
(mild diarrhea). Eat more fibre.



## Type 7

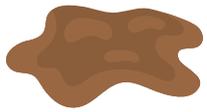
Liquid consistency with no solid pieces  
(severe diarrhea). Eat more fibre and  
seek medical help.



Bristol Stool Chart reproduced with permission from Positive Partnerships.

# Appendix 6: My weekly stool chart

Tick the relevant number for each day of the week to share with your health professional.

Type	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
1 							
2 							
3 							
4 							
5 							
6 							
7 							

# Activities to develop interoceptive awareness



# Interoception activities

This section provides activities designed to develop a practical application of interoception.

Each activity focuses on creating and noticing a change in some aspect of one's internal self, such as, one's **muscular system, breathing, temperature, pulse or touch**. People with developing interoception may find it more difficult to identify the physiological changes that signal mood changes or bodily self-regulation needs. Interoception activities teach us to consciously connect with these.

Each activity focuses on a particular action or part of the body.

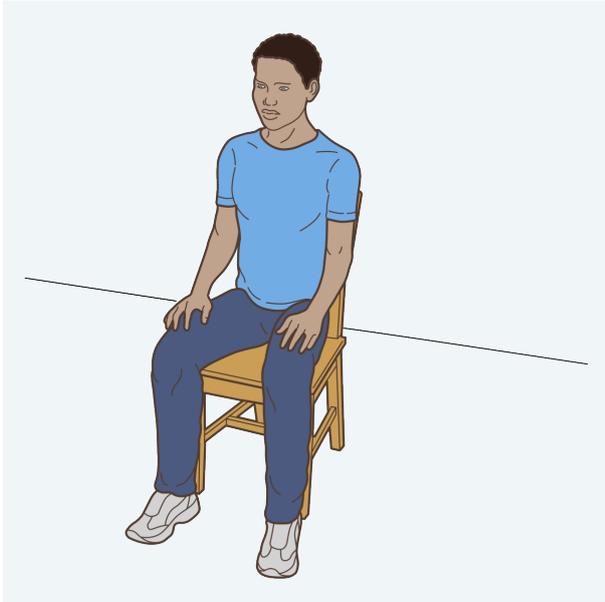
- First, the student does the action for at least 30 seconds. This enables a change to occur in the student's body state while labelling the movement and part of the body involved (e.g. toes, stretch and curl up or curl under).
- The student is encouraged to identify a **change** in their body state (e.g. hot-cold, soft-hard, stretch-relax, tight-loose etc.) and where they felt that change (arch or ball of foot, heel, toe etc.).
- The action/activity is then repeated. When completed for the second time, the student is asked to focus on a particular body part, and guided to notice feelings and sensations in the body part as they engage in the action. The body part chosen for the student to focus on should be selected from the ones the students mentioned during the first time doing the activity. This guided 'noticing' of sensation is activating interoceptive awareness, developing the conscious perception of internal body signals.
- In the activity instructions, this repetition of the activity is typically written as: 'Now repeat steps 1-x, focusing on one of the parts of your body where you felt something in the initial stretch.' However, it is important to note that students should be guided as to where to focus in this repetition of the interoception activity, and that this guidance can be varied each time the activity is done. For example in the hand stretch activity, students may be guided to notice the webbing between their fingers one day, their knuckles on another day, and the tops of their hands another day, and so on.

## How to use the interoceptive awareness activities in the classroom

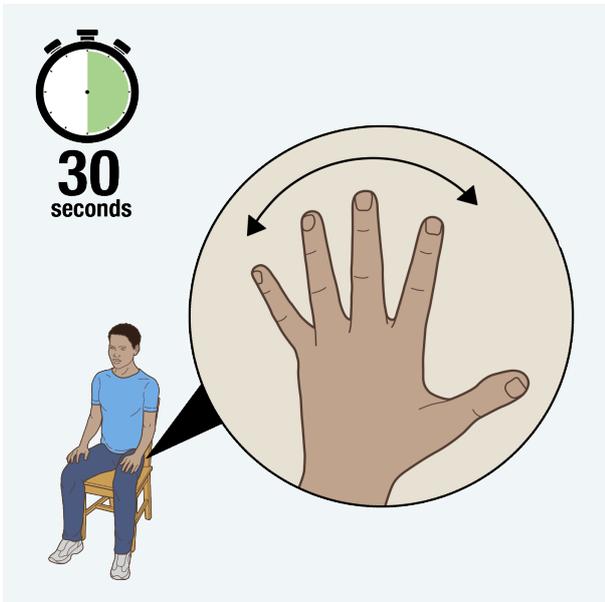
- The following 39 activities are presented in a vaguely sequential way. It is a good idea to start with the earlier activities first, as these focus on building single interoception skills. As you work through to later activities, students will build their skills, and will be asked to notice sensations in different places (or multiple places) or observe differences in intensity.
- Within your interoception program, be sure to return to earlier activities as well, as this will help students explore differences in how they respond to the activities they've done before.
- As you get more comfortable with the activity process, there's no need to always follow the script directly – you can vary your questioning. If one time you asked about where students felt the stretch, the next time you might ask about intensity, or if they felt it in more than one place. All these ways of identifying the sensations are developing interoceptive awareness, which is the conscious or mindful perception of internal body signals. With time, students will also develop better interoceptive language with which to talk about what they are feeling.
- Be sure to make any necessary modifications to consider the ages and abilities of your students. This might mean lessening the intensity or frequency of an activity or reducing the time spent.
- For more strenuous exercises, encourage your students with the knowledge that with experience and practice the activities will get easier and that any pain experienced will stop when the stretch or activity stops. This can be particularly important for autistic students. If you are doing these activities with students with physical disabilities and/or mobility difficulties, please work with an occupational therapist or physiotherapist to adjust activities as required.

# Activity 1: Feeling muscles – hands

Video demonstration



1. Sitting down, rest your hands on the top of your thighs.



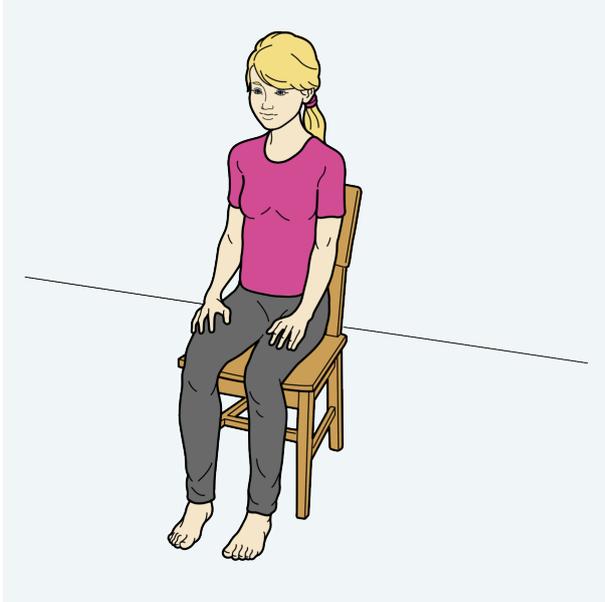
2. Now stretch your fingers as wide apart as possible and hold them stretched out like that for 30 seconds. Then rest them back, so they are relaxed again.

*Where could you feel a difference in your body when your hands were relaxed and when your hands were stretched? (Get students to point/sign/say where they felt something.)*

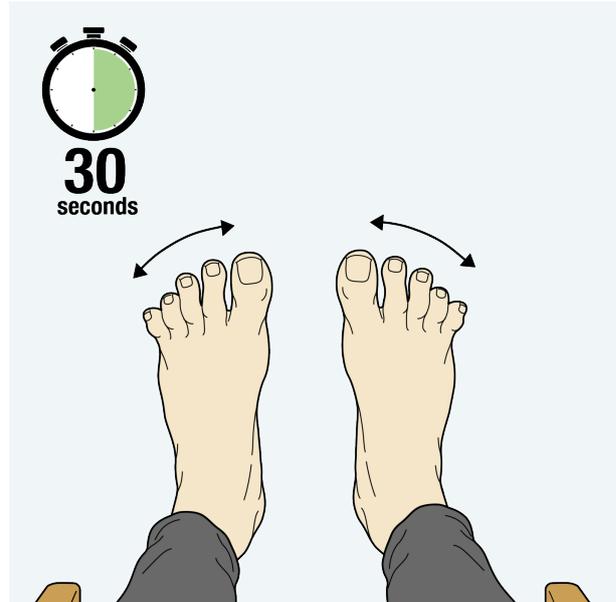
3. Now pick one of the parts of the body identified by a student and repeat 1. and 2. focusing on that body part. For example, focus on the webbing of your hands while your hands are relaxed, now stretch the fingers as wide apart as possible and focus on how the webbing between your fingers feels.

# Activity 2: Feeling muscles – feet

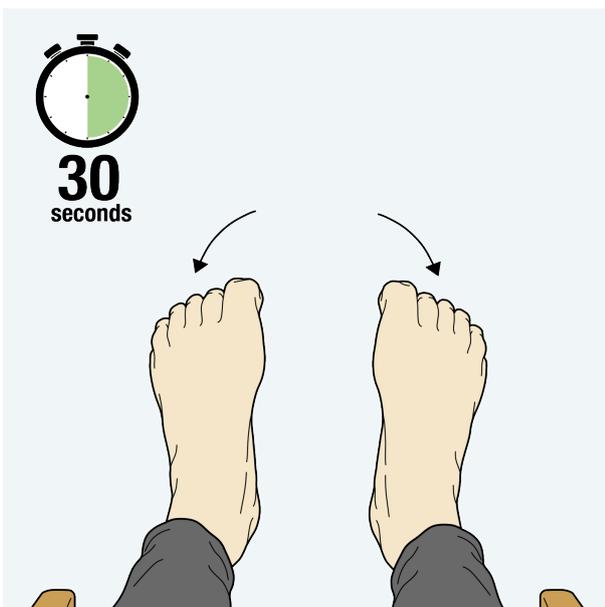
Video demonstration



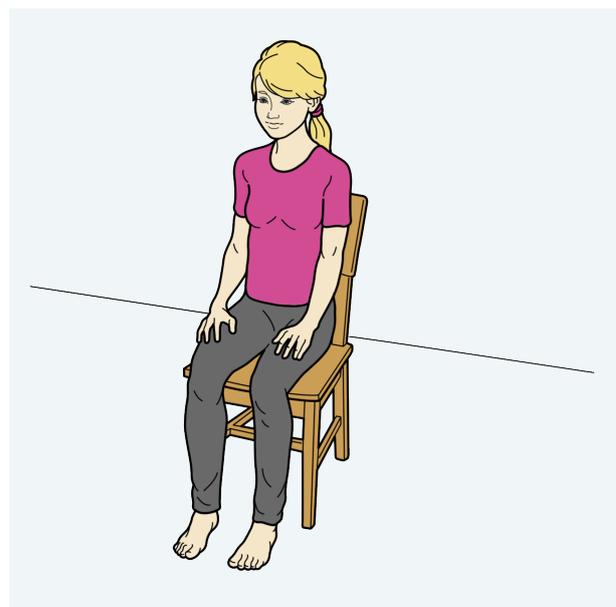
1. Sitting down, rest your feet flat on the floor.



2. Now stretch your toes as wide apart as possible and hold them stretched out like that for 30 seconds.



3. Now curl your toes under and hold them curled for 30 seconds.



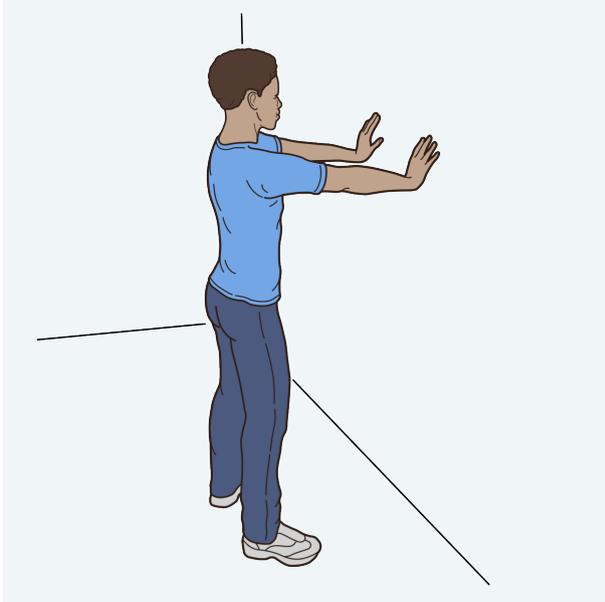
4. Rest your feet back again, flat on the floor. Now they should be relaxed.

*Where could you feel your muscles when your toes were stretched and where could you feel it when they were curled?*

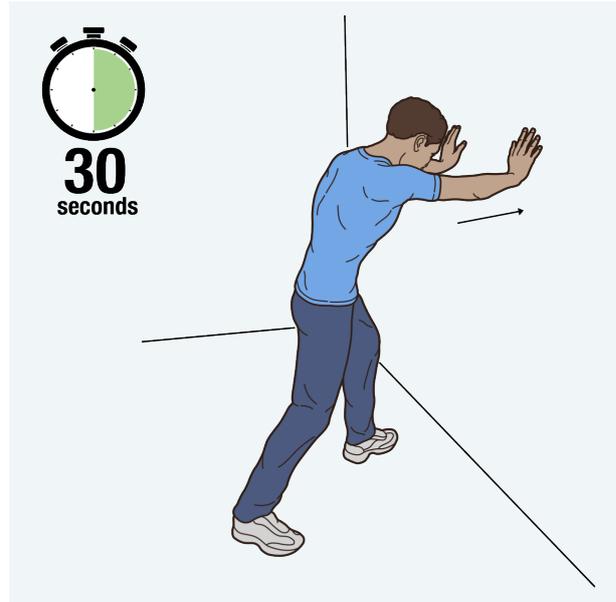
5. Now repeat steps 1–4, focusing on one of the parts of your feet or legs where you felt the stretch in your muscles during the toe stretch/curl.

# Activity 3: Feeling muscles – arms

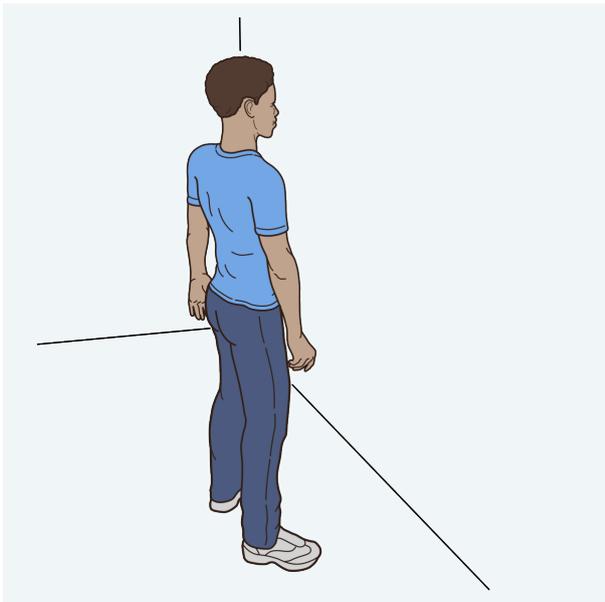
Video demonstration



1. Standing up, put your hands flat on the wall and hold them there.



2. Now push the wall as hard as you can for 30 seconds.



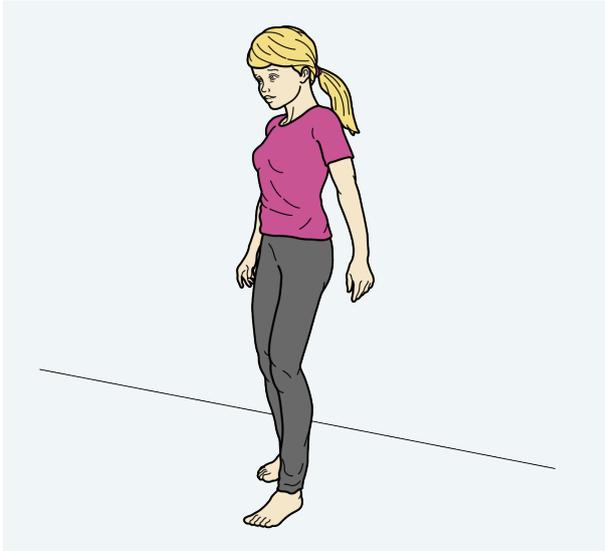
3. Stop pushing and rest your arms by your side. Your arms should now be relaxed.

*Where could you feel your muscles when you were pushing against the wall?*

4. Now repeat steps 1–3, focusing on one of the parts of your body where you felt the stretch in your muscles during the wall push.

# Activity 4: Feeling muscles – legs

Video demonstration



1. Standing up, put one foot in front of the other with both feet facing forward and legs hip-width apart, both feet flat on the floor.



2. Now move the front foot so that it only has the heel touching the floor. *Where can you feel something?* You may feel your muscle stretching on the back of your calf.



3. Now point your toes on that front foot so only your toes are touching the floor. *Can you feel something in your foot as well as your leg? Is this the same as before or different?*



4. Put your feet back flat on the floor and change which leg is in front, then repeat the heel touch and toe touch. *Does it feel the same or different?*
5. Now repeat steps 1–4, focusing on one of the parts of your feet or legs where you felt the stretch in your muscles during the heel/toe walking.

## Follow-on activity:

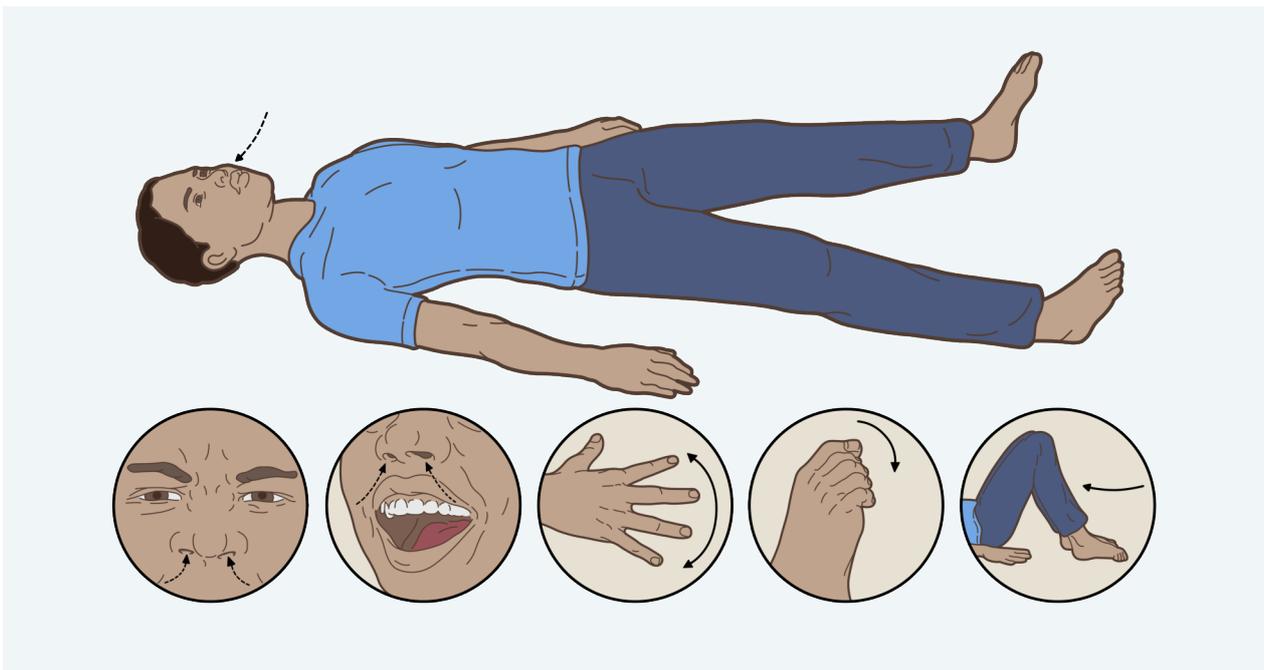
*Can you have one foot pointed and one heel touching the floor at the same time?  
Can you move your legs in other ways to feel other muscles in your legs?*

# Activity 5: Feeling muscles – whole body

Video demonstration



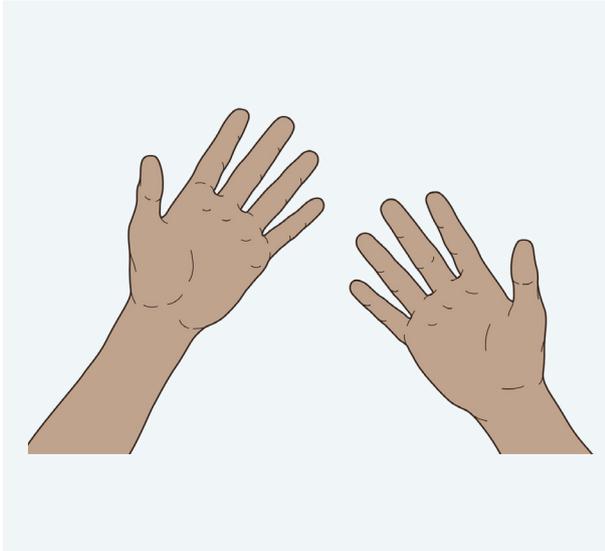
1. Lie down in a space on the floor, with your arms relaxed by your side. You can close your eyes if you want to. Breathe slowly.
2. As you breathe in scrunch your eyes and forehead and then as you breathe out relax them again.
3. As you breathe in open your mouth as wide as possible then as you breathe out relax your mouth.
4. Keep breathing slowly.
5. As you breathe in stretch your fingers apart as wide as possible, then as you breathe out, relax your fingers.



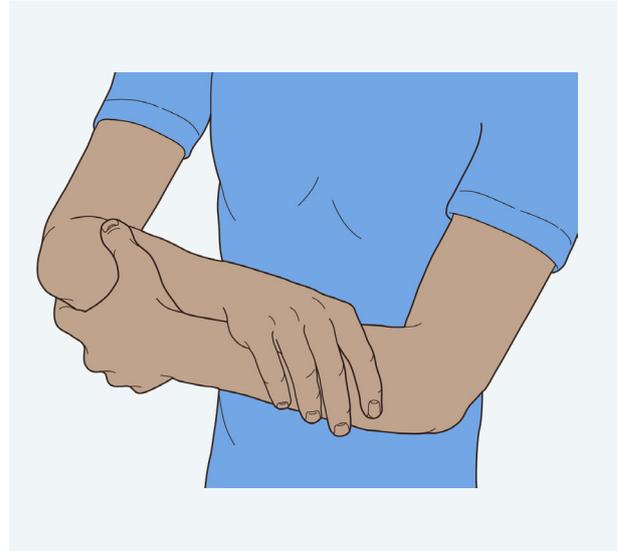
6. Now stretch your fingers and your arms as you breathe in, stretch as much as possible.
7. As you breathe out, relax your arms and fingers.
8. As you breathe in curl your toes up to scrunch your feet, then relax your feet as you breathe out.
9. Now as you breathe in scrunch your toes up and pull your feet in towards your body just using your leg muscles, and relax as you breathe out.
10. Breathe slowly in and out for a few breaths and then when you are ready, breathe in and tense up your face, hands, arms, feet and legs and then slowly breathe out and relax all the muscles.
11. Stay relaxed and breathe in and out slowly for a few more breaths.
12. Now repeat this activity focusing on how each part of the body feels when it is stretched or scrunched compared to how it feels when it is relaxed.

# Activity 6: Feeling temperature #1

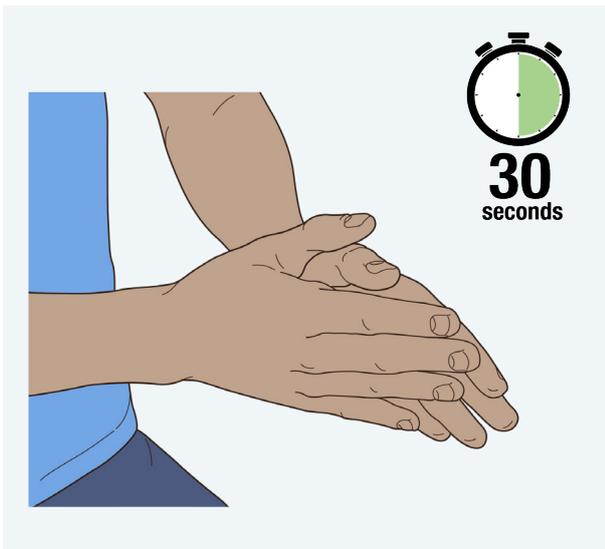
Video demonstration



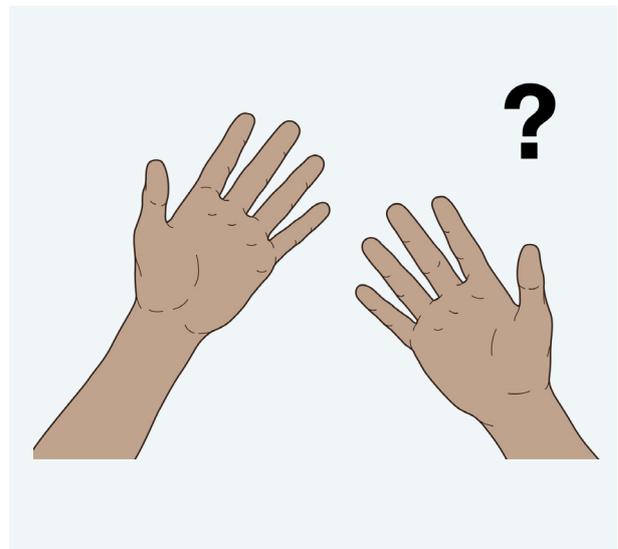
1. Standing still, bring your attention to how your hands feel.



2. Now, touch your arms with your hands. Are your arms warmer or cooler than your hands?



3. Now rub your hands together really fast for 30 seconds.



4. Stop after 30 seconds. Do your hands feel warmer or cooler than before? Touch your arms with your hands. Are your arms warmer or cooler than your hands?
5. Repeat steps 1-4 but at step 4 touch your face with your hands instead of your arms.

## Follow-on activity:

How could you cool your hands down when they are hot? What is the safe temperature range for human bodies? How do humans cool down/warm up?

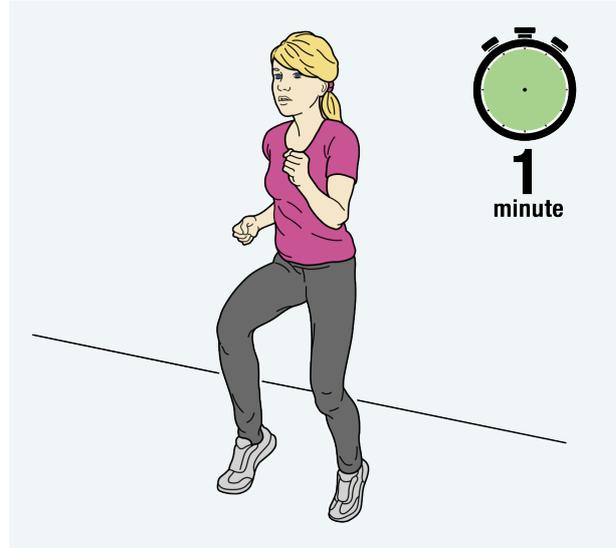
# Activity 7: Feeling temperature #2

Video demonstration



1. Standing still, bring your attention to your hands. Now touch your face with your hands.

*How does your face feel? Does it feel warmer or cooler than your hands?*



2. Now, jog really fast on the spot for one minute.



3. Stop after one minute and touch your face with your hands.

*How does your face feel now? Does your face feel warmer or cooler than before?*

## Follow-on activity:

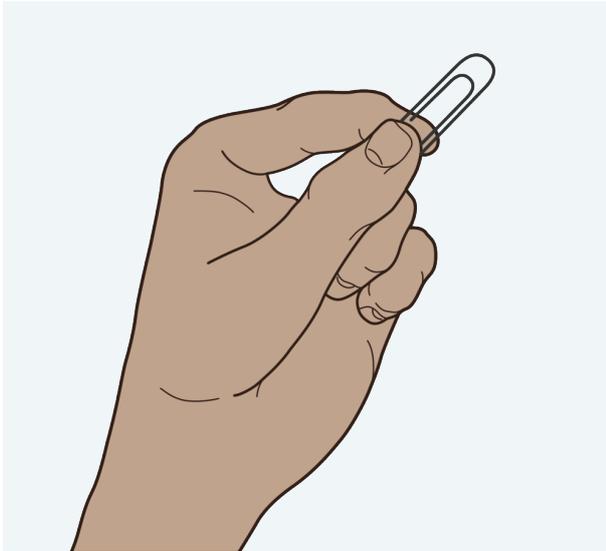
*How can you measure body temperature? Does your face get hotter or colder if you go outside?*

# Activity 8: Feeling temperature #3

Video demonstration

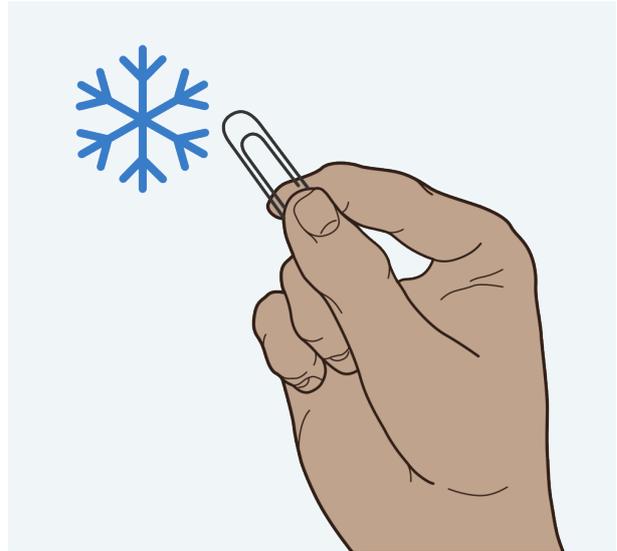


**Note:** this activity requires a box of paperclips, half of which have been in the freezer.



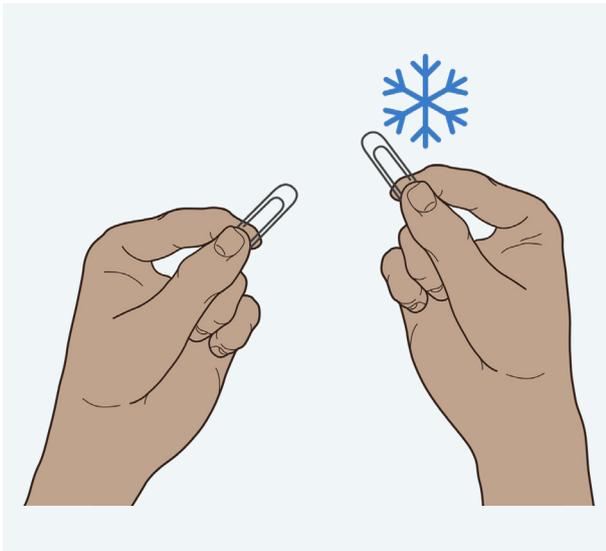
1. Give each student a room temperature paperclip.

*How does the paperclip feel? Is it hot, warm, cool or cold?*



2. Put the paperclip down and get one out of the box (from the freezer).

*How does this paperclip feel? Is it hot, warm, cool or cold?*



3. Now pick up the first paperclip in your other hand.

*Does it feel warmer or cooler than it did before?*

## Follow-on activity:

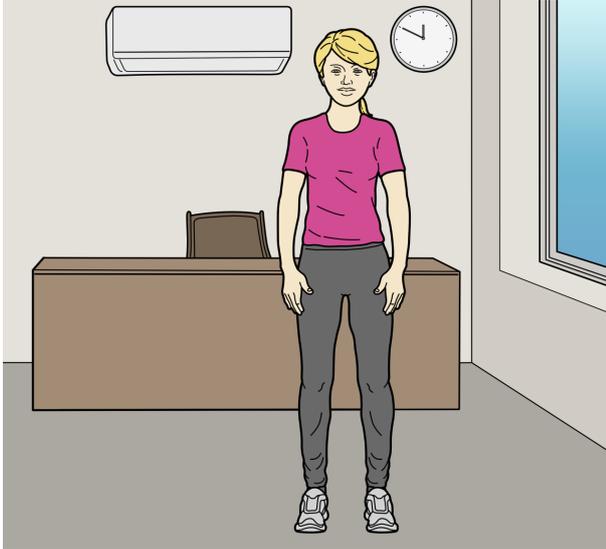
*Would the cold clip feel less cold if you wear gloves? How does having cold fingers make your body feel?*

# Activity 9: Feeling temperature #4

Video demonstration



**Note:** this activity can only be done when the outside temperature is quite different to the classroom temperature (this could be done inside by turning off the air-conditioning or heating instead of going outside).



1. Standing still, feel the air on your skin. *Is it hot, warm, cool or cold?*



2. Notice how your hands and face feel. *Do they feel the same temperature or different? Is it comfortable or uncomfortable?*



3. Now go outside for a few minutes (or turn the air-conditioning or heating off for 5 minutes).
4. Stand still and feel the air on your skin. *Is it hot, warm, cool or cold?*



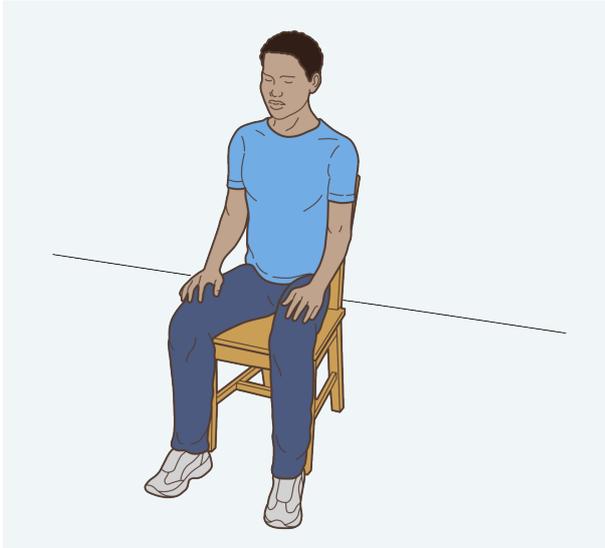
5. Notice how your hands and face feel now. *Do they feel the same temperature or different? Is it comfortable or uncomfortable?*  
*Which air temperature did you prefer?*

## Follow-on activities:

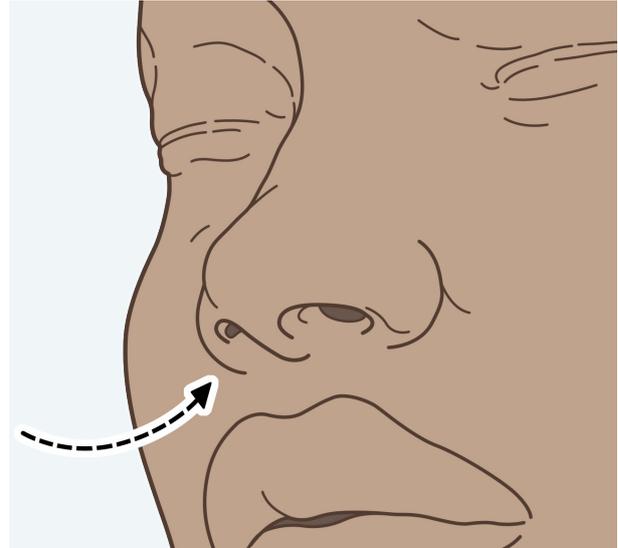
*Why do people wear particular types of clothing in some sorts of weather and not others? Explore clothing and response to temperatures across cultures.*

# Activity 10: Deep breathing

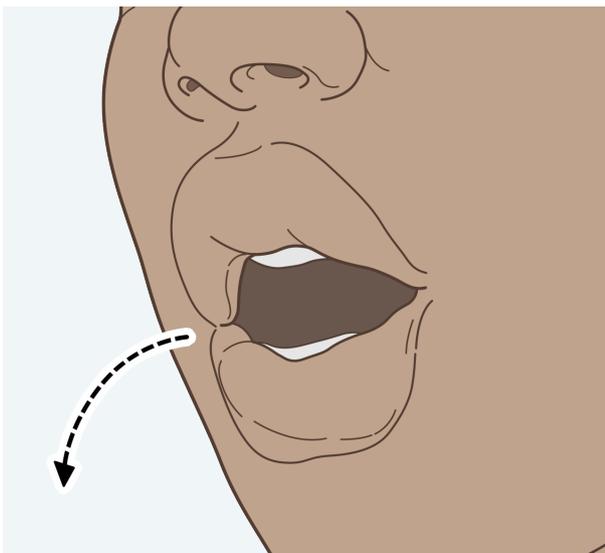
Video demonstration



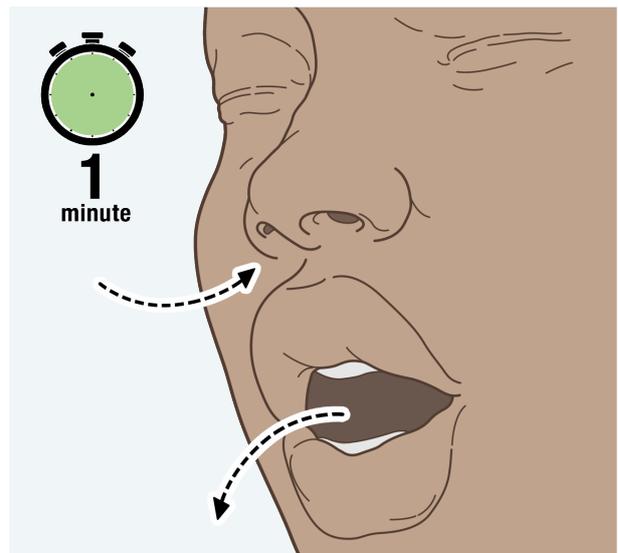
1. Sitting comfortably, on a chair or on the floor, close your eyes.



2. Breathe in through your nose while counting to five in your head. Note to teacher: count out loud initially to support understanding.



3. Open your mouth and breathe out while counting to five in your head.
4. Now close your mouth and breathe in through your nose while counting to five. Note to teacher: support understanding by saying 'breathe in, one, two, three, four, five, and open mouth and breathe out'.



5. Continue the deep breathing for one minute.

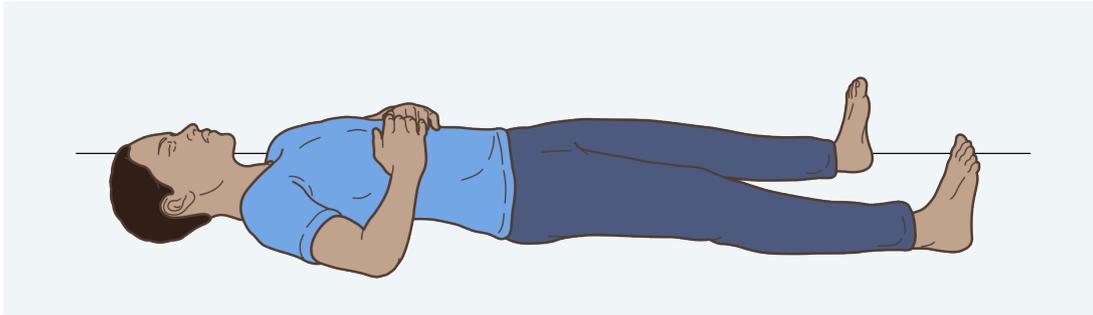
*How do you feel? Which parts of your body moved when you were breathing in? Could you feel the air entering and exiting your body?*

## Follow-on activity:

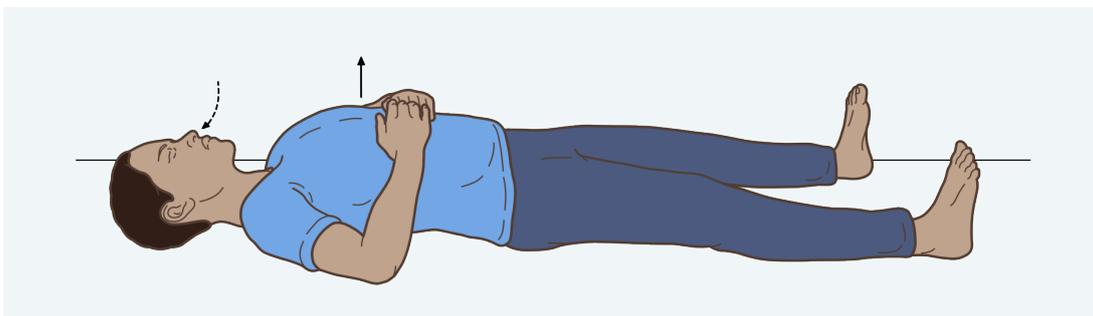
*Blow up a balloon. As it inflates, explain that this is like the air being breathed into our lungs. Let the air out of the balloon and explain this is like the air being breathed out.*

# Activity 11: Belly breathing

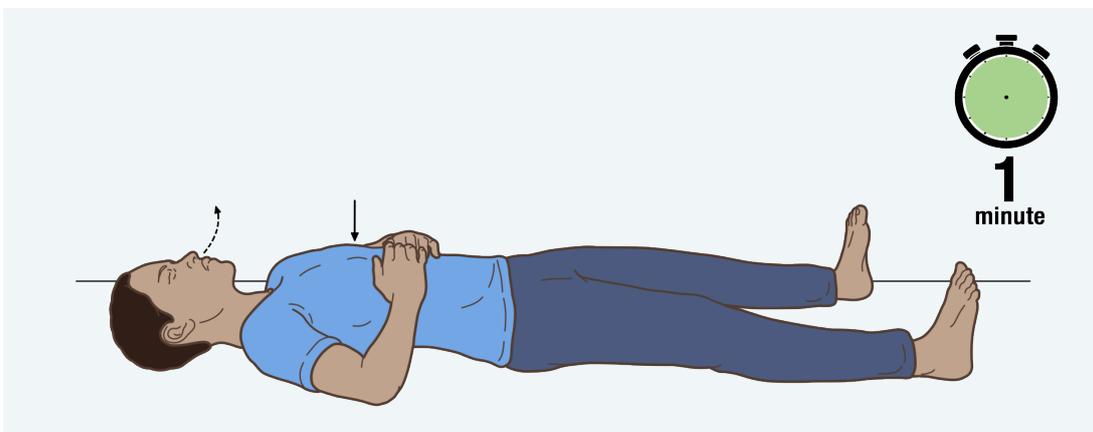
Video demonstration



1. Lie down, relaxed and feeling comfortable. Close your eyes and keep your mouth closed. Rest your hand on the centre of your ribs or just below your ribs, not pressing too hard, your fingertips should be just touching.



2. Breathe in slowly and deeply through your nose. You should feel your hand rising as your lungs fill with air, your fingertips should have a space between them now.



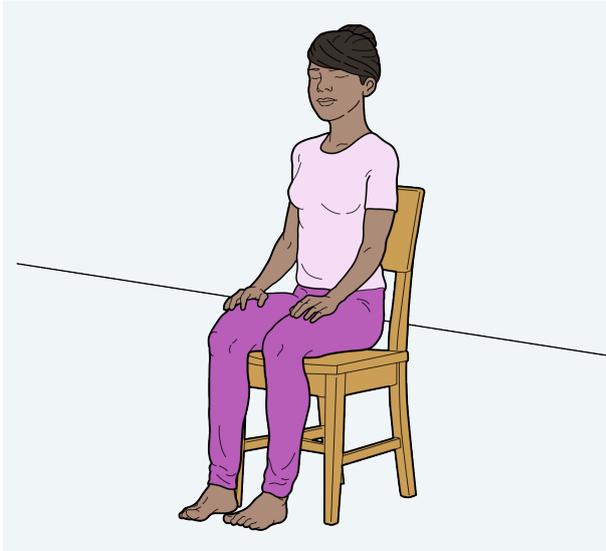
3. Now breathe out slowly through your nose, and keep breathing out. You should feel your hand moving back down as the air goes out of your lungs and your body deflates with your lungs, until your fingertips touch again.
4. Keep practising this breathing in and out for one minute. *Can you feel your body moving even if you move your hands off your ribs?*

## Follow-on activity:

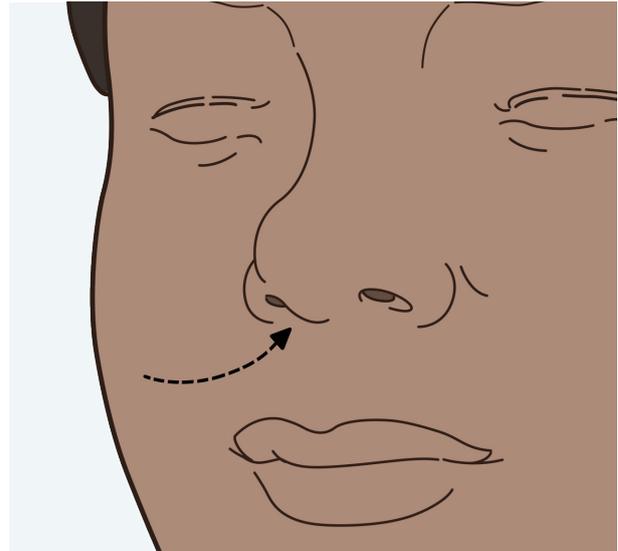
*Does your body rise and fall differently when you breathe in and out through your mouth? What do our lungs do? Where are they? How can we keep our lungs healthy?*

# Activity 12: Focused breathing

Video demonstration



1. Sit comfortably on a chair or on the floor. Close your mouth and eyes. Breathe in and out through your nose slowly and quietly.



2. While you are breathing in and out, focus on feeling the air entering and exiting your nostrils. If you can't feel it yet, think about where you can feel it, maybe on your upper lip or between your lips and nostrils.



3. When you can feel the air going in and out of your nose, notice how far into your nose and/or body you can feel the air entering. If you get distracted, bring the focus back to your breathing, slowly and quietly, feeling the air passing in and out of your nose.

## Follow-on activity:

Try this breathing exercise after recess and lunch for a week. Notice if it helps you to focus on your work.

# Activity 13: Feeling firm touch versus light touch #1

Video demonstration



1. Sit down on a chair or on the floor, and rest two fingers on the top of your leg.

*What can you feel in your leg and in your fingers?*



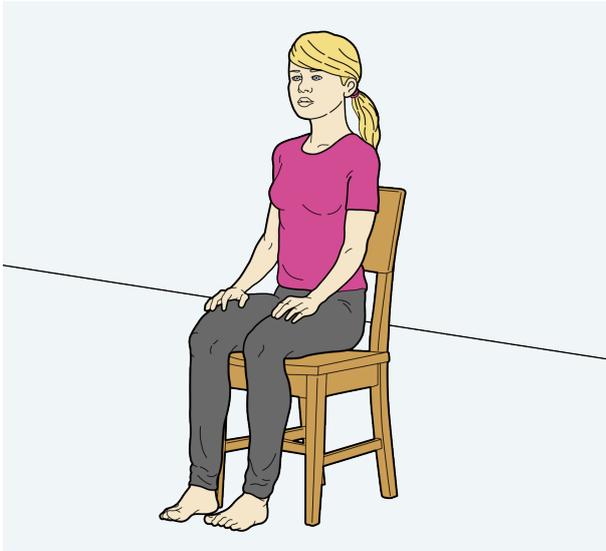
2. Now push the two fingers into your leg hard.
3. Repeat steps 1 and 2 focusing on how your leg feels with each type of touch.
4. Repeat steps 1 and 2 focusing on how your fingertips and hand feel with each type of touch.

## Follow-on activity:

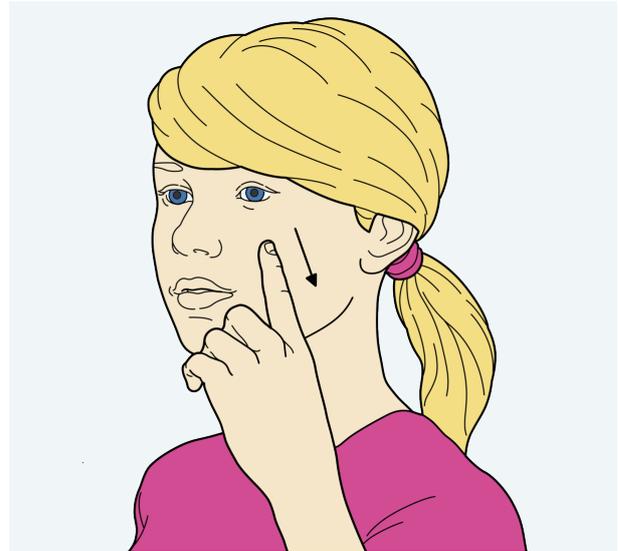
*What happens if you do this on your shin? Does this feel different on your arm to your leg?*

# Activity 14: Feeling firm touch versus light touch #2

Video demonstration



1. Sit down on a chair or on the floor.



2. With one finger stroke your cheek.



3. Now stroke the back of your hand.

*Was the feeling in your fingertip the same or different?*

*Did each touch feel gentle?*

*Can you still feel anything on your face or arm or finger after these light touches?*

4. Now drag your finger firmly across your cheek and then firmly across the back of your hand.

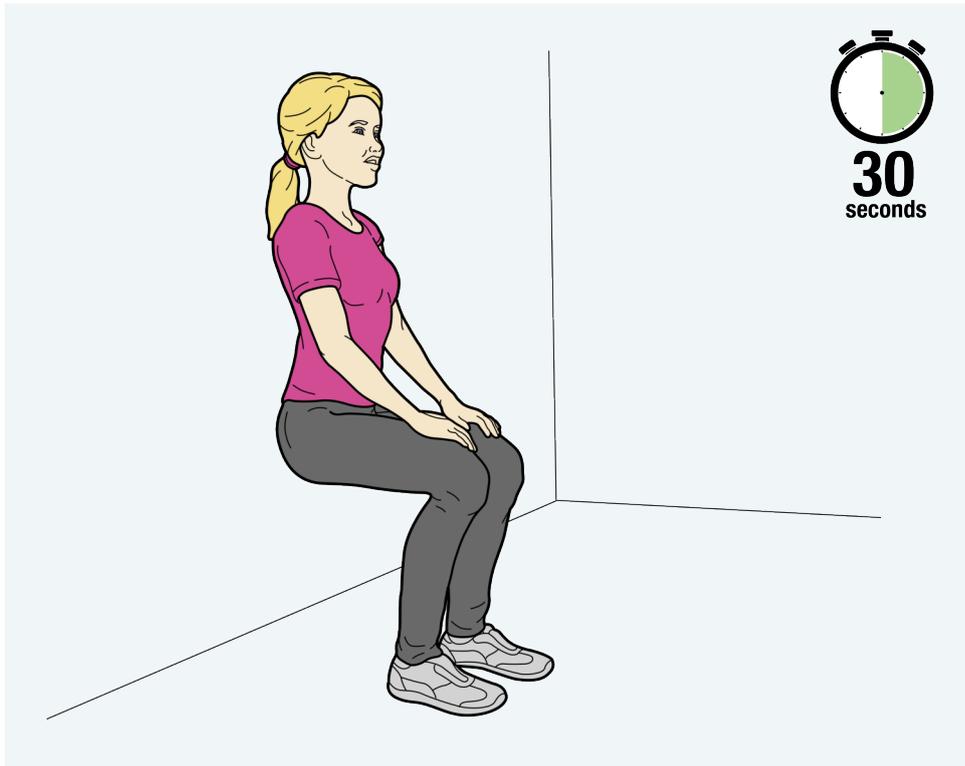
*How did that feel? Can you still feel anything on your face or arm or finger after these firm touches?*

## Follow-on activity:

*What happens if you do this on the side of your leg? Does this feel different on your hand to your leg?*

# Activity 15: Wall squat

Video demonstration



1. Find a clear space of wall to lean against.
2. Press your back against the wall and slide down the wall and bend your knees. Your knees should be at a 90-degree angle. This position is called a squat.
3. Hold this position for 30 seconds.

*Where did you feel it in your body when you were in the squat position?*

4. Repeat the activity, but this time focus on your thigh muscles.

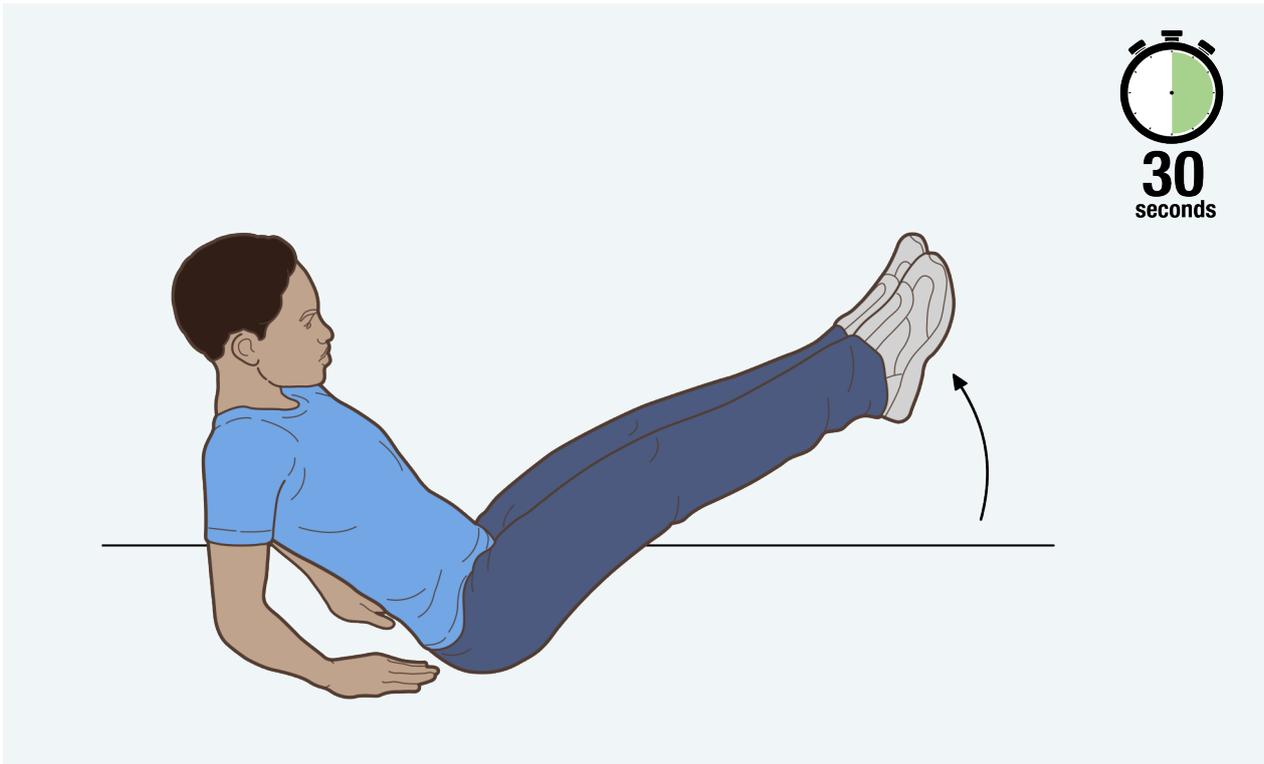
*How did your thigh muscles feel while holding that stretch?*

## Follow-on activity:

*What happens if you extend the time limit for 60 seconds? Then 90 seconds?*

# Activity 16: Core muscles

Video demonstration



1. Sit down on the floor. With your bottom on the floor, raise your legs into the air. If you need, put your hands on the floor to support you.
2. Now hold your legs in the air for 30 seconds. Younger students can start by holding for just 10 to 15 seconds and build up over time.

*Where did you feel it in your body when you had your legs in the air?*

3. Now repeat the activity, but this time focus on the part of the body where you felt it the first time.

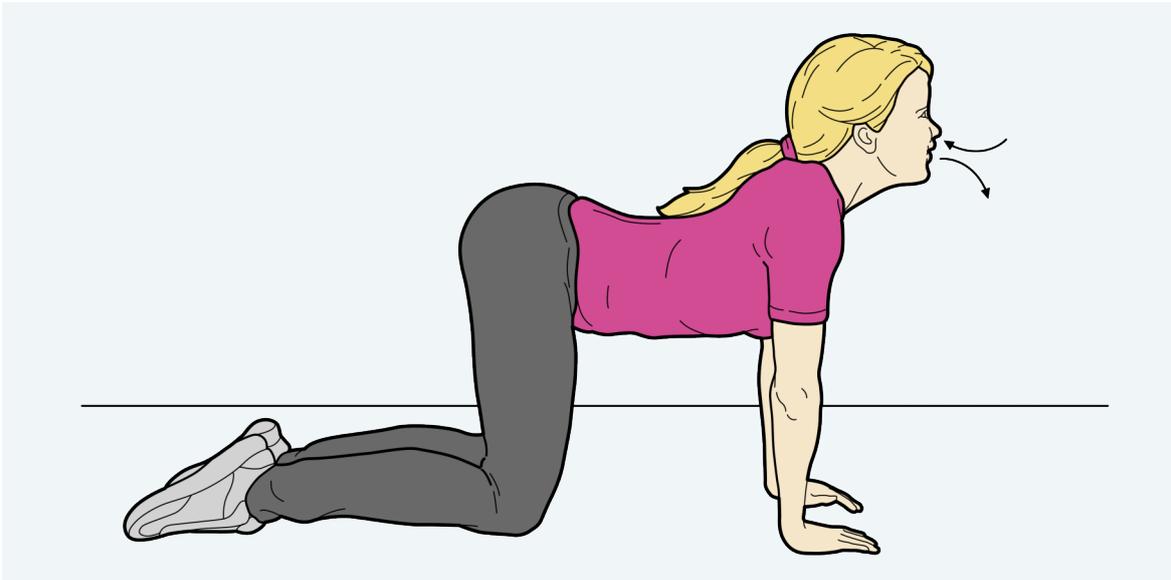
*Did you feel the stretch more intensely doing it for the second time?*

# Activity 17: Cat/cow stretch

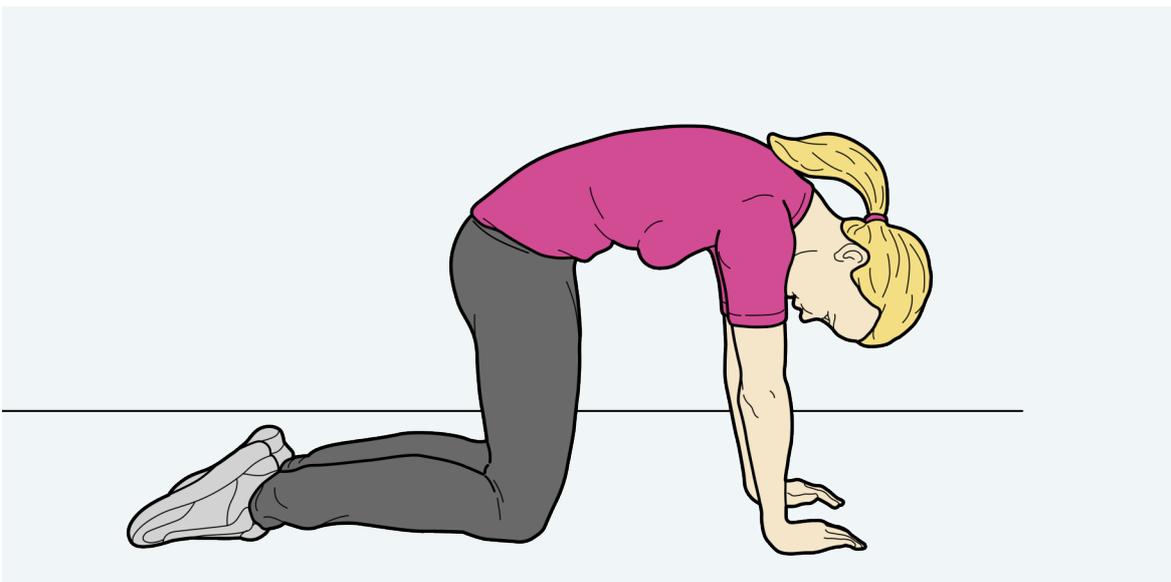
Video demonstration



1. Start on all fours. Your back should be flat like a tabletop. Eyes should look straight down to the ground.



2. Breathe in through your nose, drop your belly down and slowly lift the head/neck up, eyes looking up. This is a cow stretch.



3. As you exhale through your mouth, lift the belly and spine up so the back is arched like a cat.
4. Alternate five to ten cow to cat stretches.

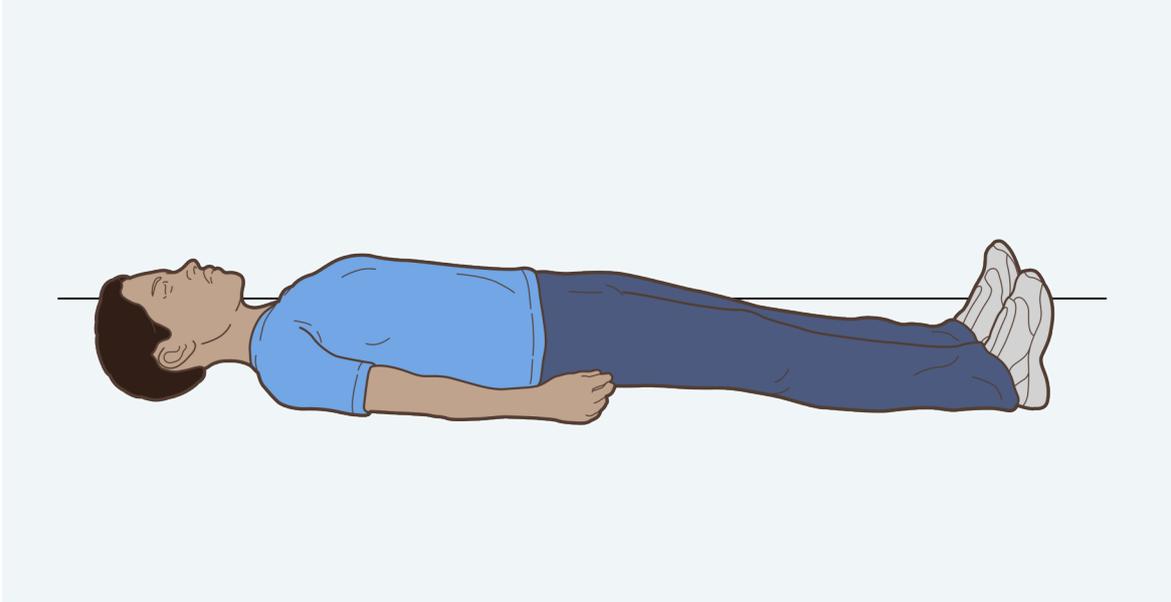
*Where did you feel it in your body when you were stretching?*

5. Now repeat the cat/cow stretch but this time focus on one of the body parts you identified in step 4.

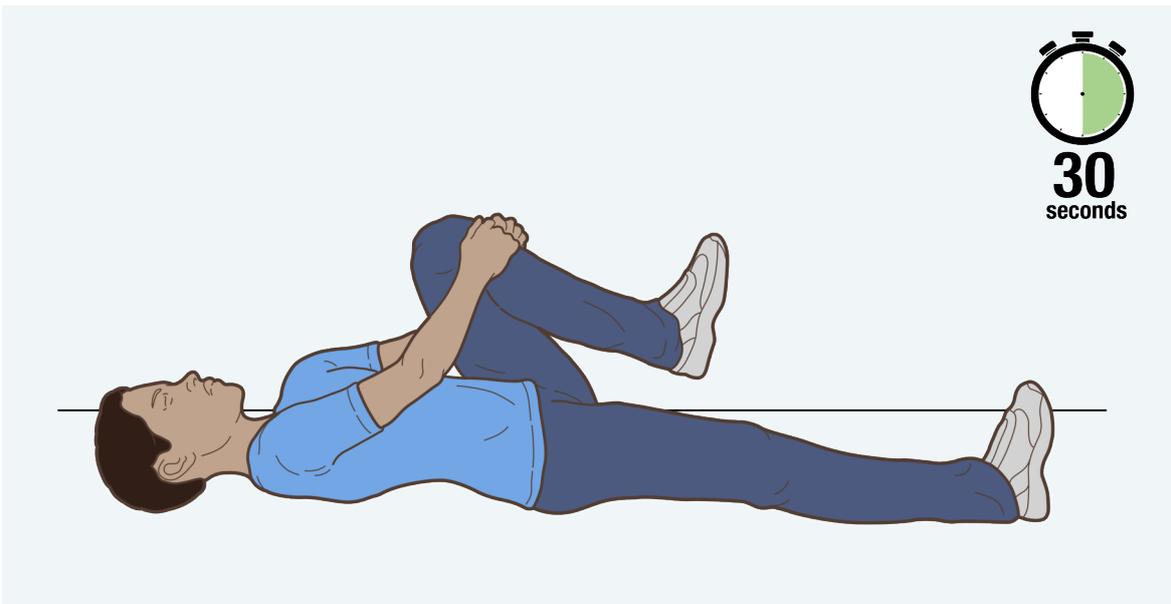
*Did you feel the stretch somewhere different doing the cat stretch compared to the cow stretch? Could you notice the stretches in other places as well as the one you were focused on?*

# Activity 18: Knee-to-chest stretch

Video demonstration



1. Start by lying on your back.



2. Pull one knee into your chest, while keeping the other leg straight and your lower back pressed into the floor.
3. Hold for 30 seconds.
4. Swap legs.

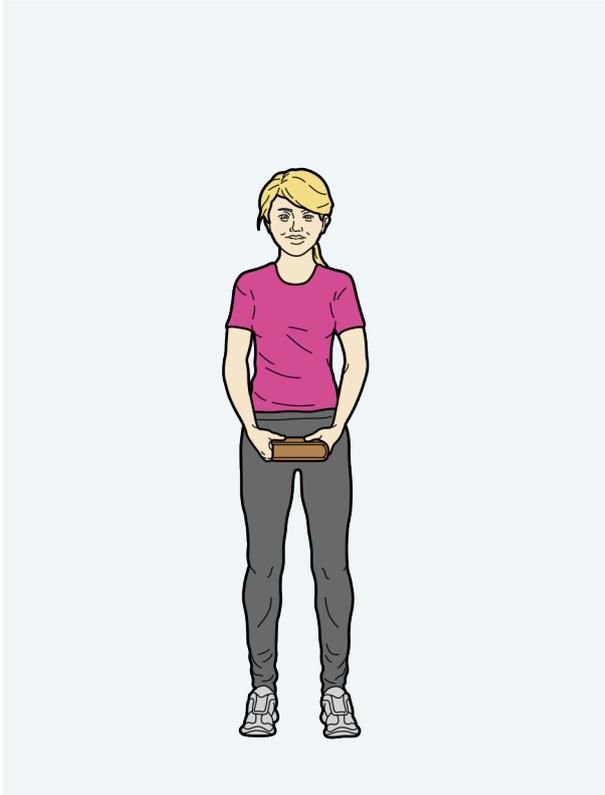
*Where did you feel it in your body when you were completing the stretch?*

5. Now repeat the knee-to-chest stretch but this time focus on one of the body parts you identified in step 4.

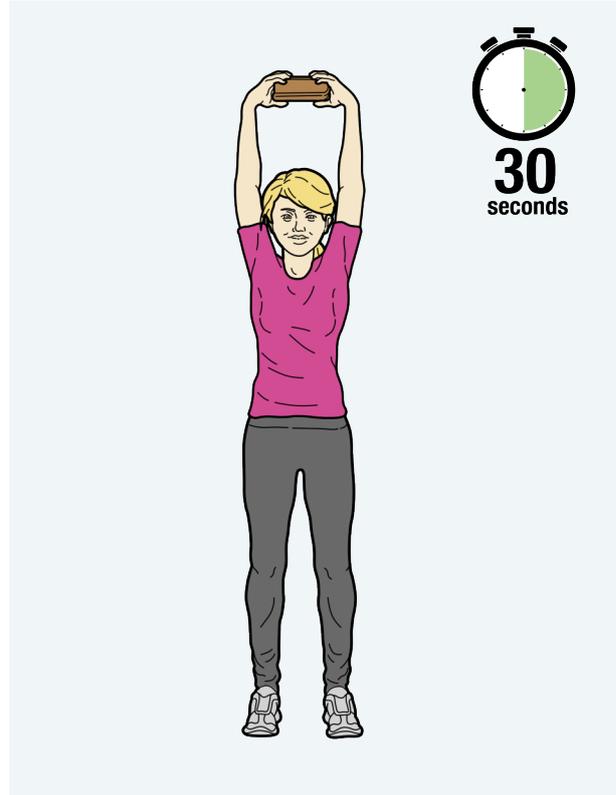
*Where did you feel it in your body after this round of knee-to-chest stretches? Did you feel it in the same place as last time or somewhere new?*

# Activity 19: Shoulder stretch

Video demonstration



1. Start by grabbing two books.



2. Lift your arms up while holding the books in your hand.

3. Hold this pose for 30 seconds.

*Where did you feel it in your body when we were stretching?*

4. Now repeat the shoulder stretch, but this time focus on one of the body parts you identified in step 3.

*Where did you feel it in your body this time lifting the books? Did you feel it in the same place as last time or somewhere new?*



1. In a seated position, place the soles of your feet together and hold them with your hands. The legs are now forming the 'butterfly wings'.
2. Place your elbows gently between your legs or rest them on your knees.
3. Gently press the knees down to increase the stretch.

*Where did you feel it in your body when we pushed down on our knees?*

4. Now repeat the butterfly wings stretch but this time focus on one of the body parts you identified in step 3.

*Where did you feel it in your body this time with the butterfly wings stretch? Did you feel it in the same place as last time or somewhere new?*

## Follow-on activity:

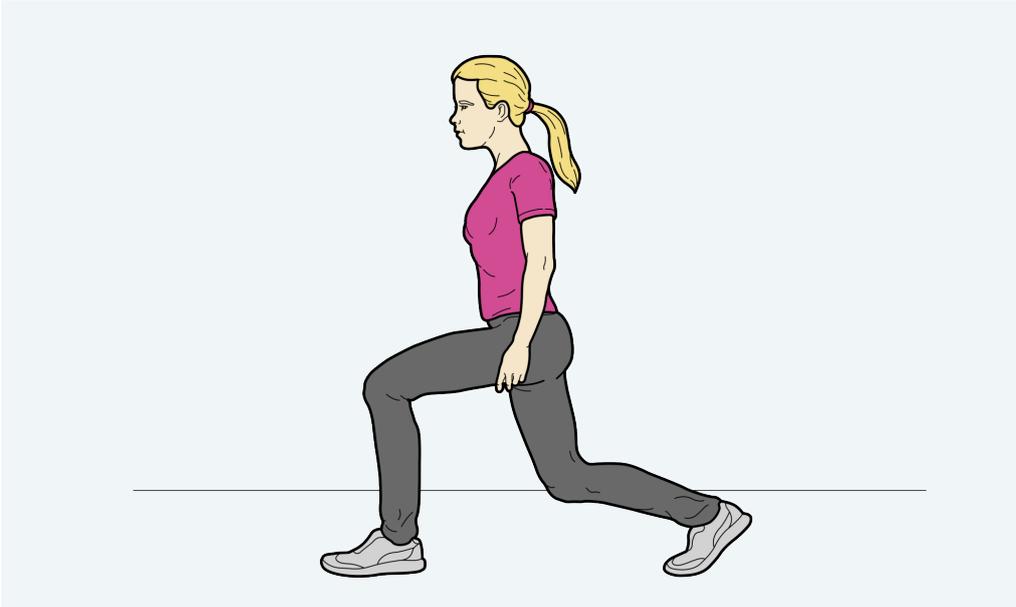
*To add a spine stretch, bend forward from the upper back and reach forward towards your feet.*

# Activity 21: Surfing stretch

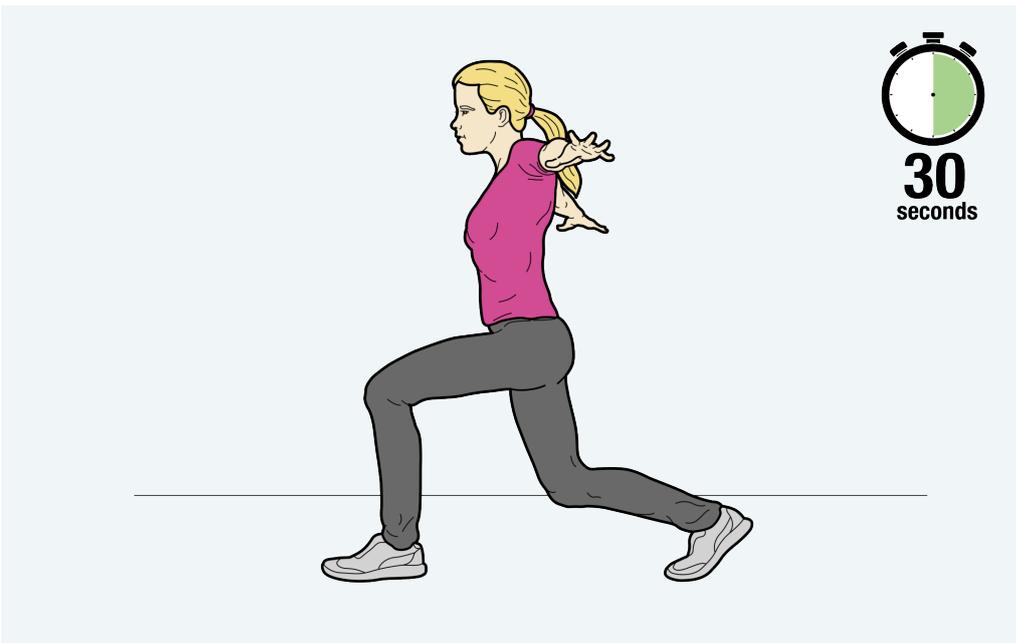
Video demonstration



1. Start in a standing position.



2. Put your left leg forward and your right foot back into a slight lunge.

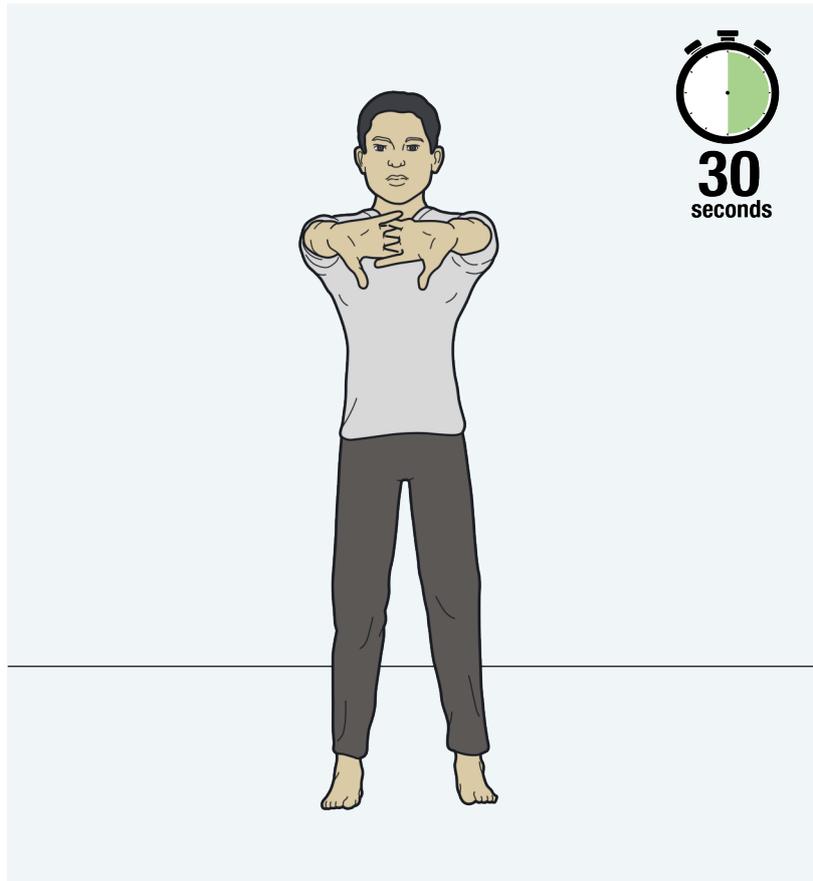


3. Lift your arms and hold them out straight to your sides. This is called the surfing stretch. Hold this pose for 30 seconds.

*Where did you feel it in your body when you were doing the surfing stretch?*

4. Now repeat the surfing stretch but this time focus on one of the body parts you identified in step 3.

*Where did you feel it in your body this time doing the surfing stretch? In the same place as last time or somewhere new?*



1. Start in a standing position.
2. Put your hands out in front of you and interlace your fingers. Push your hands out and flip your hands over.
3. Hold this pose for 30 seconds.

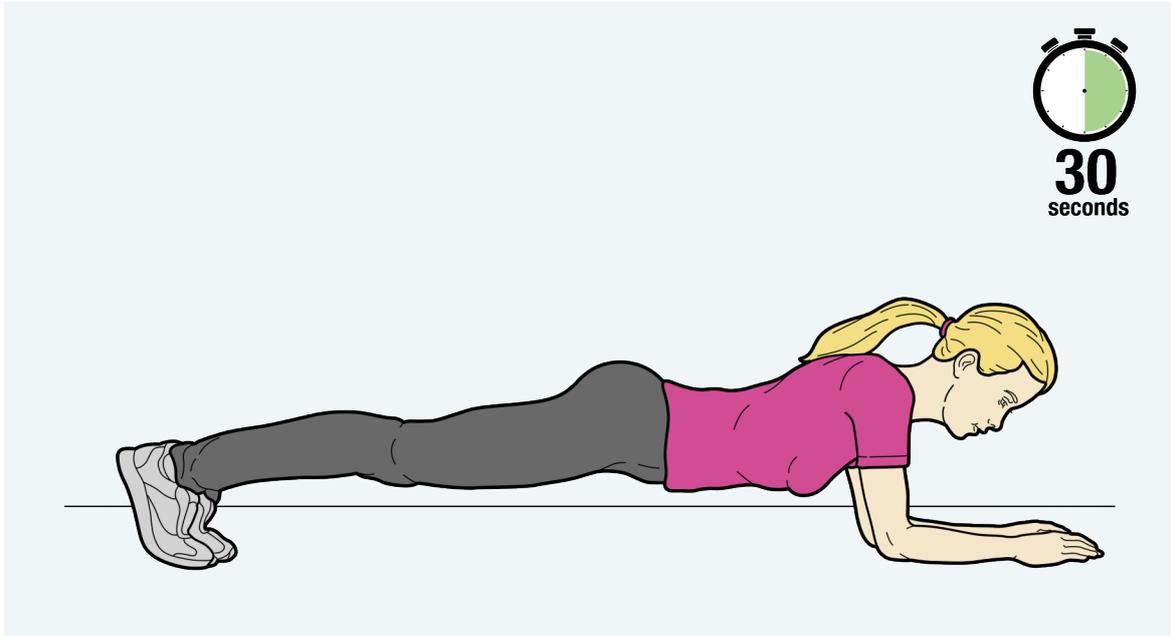
*Where did you feel it in your body?*

4. Now repeat the knuckle cracker stretch but this time focus on one of the body parts you identified in step 3.

*Where did you feel it in your body this time doing the knuckle cracker stretch? Did you feel it in the same place as last time or somewhere new?*

# Activity 23: Plank

Video demonstration



1. Start by lying flat on your stomach. Place your hands under your shoulders. Press your toes into the floor.
2. Push your body up off the floor and hold that position for 30 seconds. If you can't hold your body for 30 seconds, that's OK, just do it for as long as you can.

*Where did you feel it in your body? If it ached or hurt somewhere, notice how the ache or hurt has stopped now you are no longer in the plank position.*

3. Now repeat the plank but this time focus on one of the body parts you identified in step 2.

*Where did you feel it in your body this time in the plank position? Did you feel it in the same place or somewhere new? If you keep practising the plank, your body will get stronger over time and it will get easier. Any ache or hurt will decrease too.*

## Follow-on activity:

*Next time, can you hold the plank for 45 seconds? Then 1 minute?*



1. Stand tall, head up high and pull in your belly button. Spread your arms and legs into a star shape.



2. Breathe in through your nose as you slowly stretch one arm over your head. Slide your other arm down your leg.
3. Slowly tilt your star to the other side and breathe out through your mouth.
4. Repeat both sides.

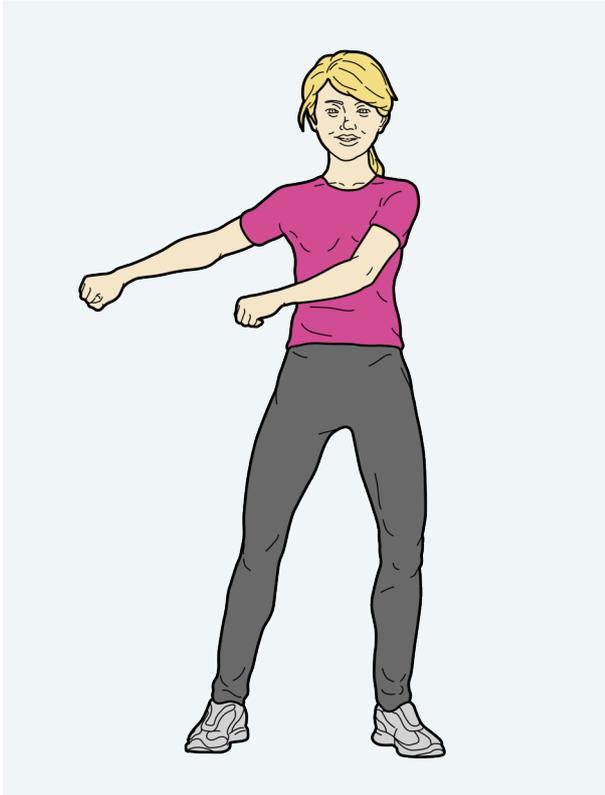
*Where did you feel it in your body?*

5. Now repeat the star stretch but this time focus on one of the body parts you identified in step 4.

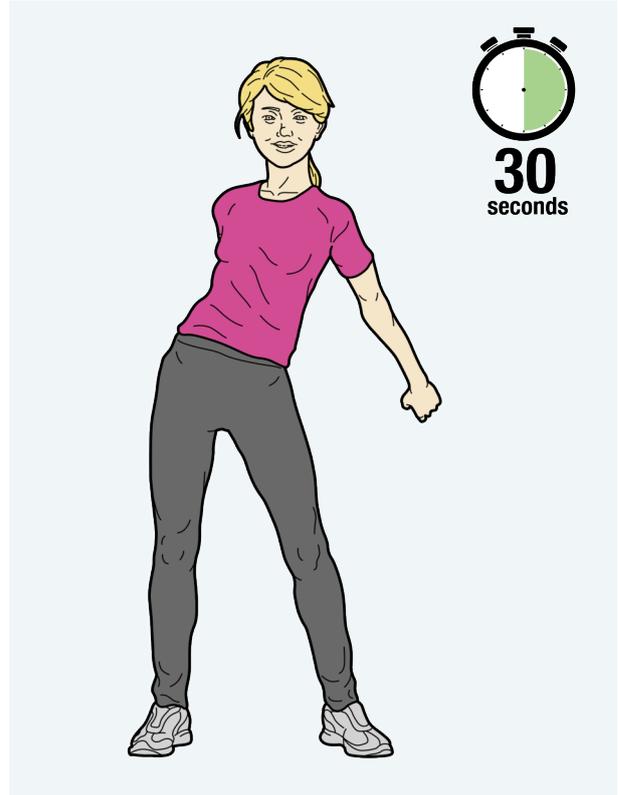
*Where did you feel it in your body this time doing the star stretch? Did you feel it in the same place or somewhere new?*

# Activity 25: Flossing

Video demonstration



1. Start by standing up with your hands by your side. Place both hands to the right side of your body.



2. Swing your right hand behind your back and your left in front of you. Swing them back out and across your body.
3. Swing your left hand behind your body and your right in front of you.
4. Repeat these movements for 30 seconds.

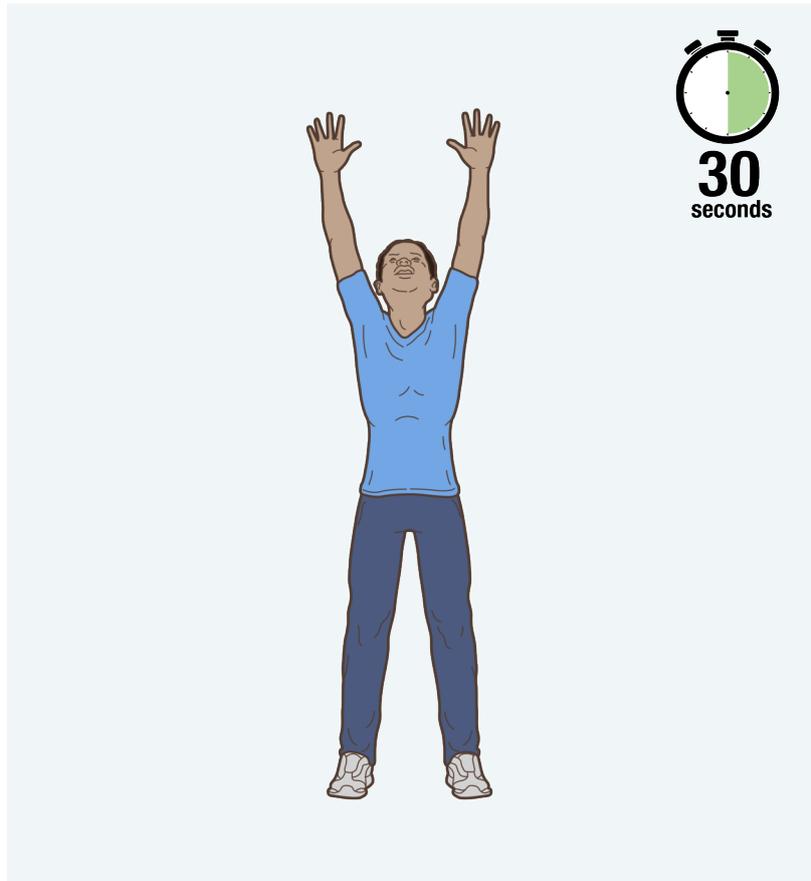
*Where did you feel it in your body?*

5. Now repeat the flossing movement but this time focus on one of the body parts you identified in step 4.

*Where did you feel it in your body this time while flossing? Did you feel it in the same place or somewhere new?*

# Activity 26: Giraffe stretch

Video demonstration



1. Stand up tall. Put both arms up and reach up as far as you can.
2. Pretend you are a giraffe, stretching your long neck up to the sky.
3. Keep holding the stretch for 30 seconds.

*Where did you feel it in your body?*

4. Now repeat the giraffe stretch but this time focus on one of the body parts you identified in step 3.

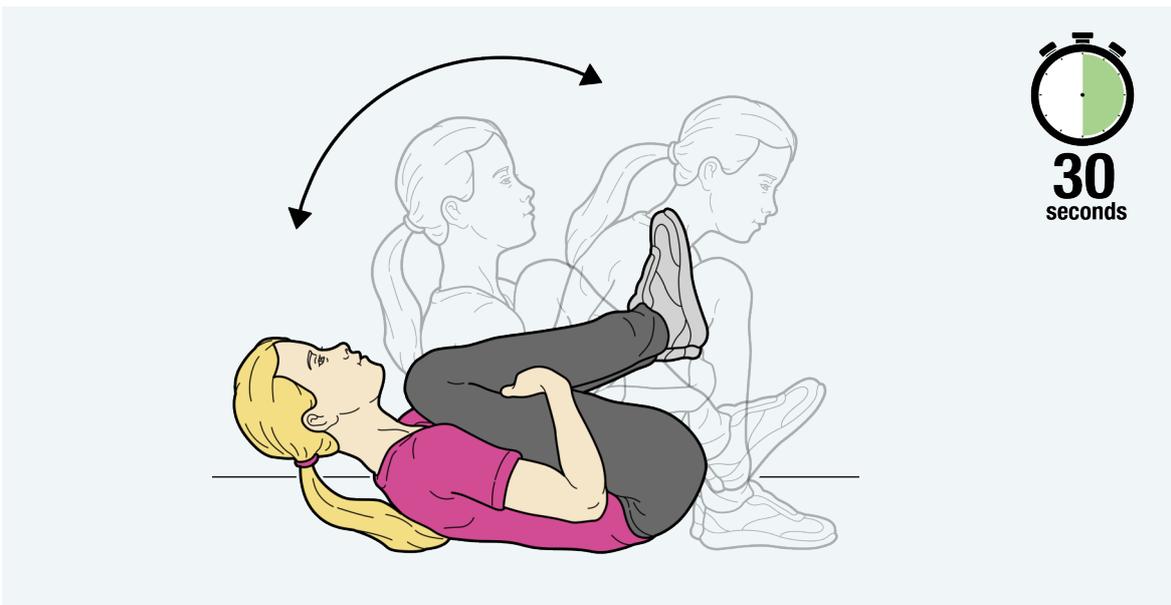
*Where did you feel it in your body this time doing the giraffe stretch? Did you feel it in the same place or somewhere new?*

# Activity 27: Rocking bug

Video demonstration



1. Sit on the floor and link your hands under your knees.



2. Lean backwards and rock forwards and backwards.

3. Keep gently rocking for 30 seconds.

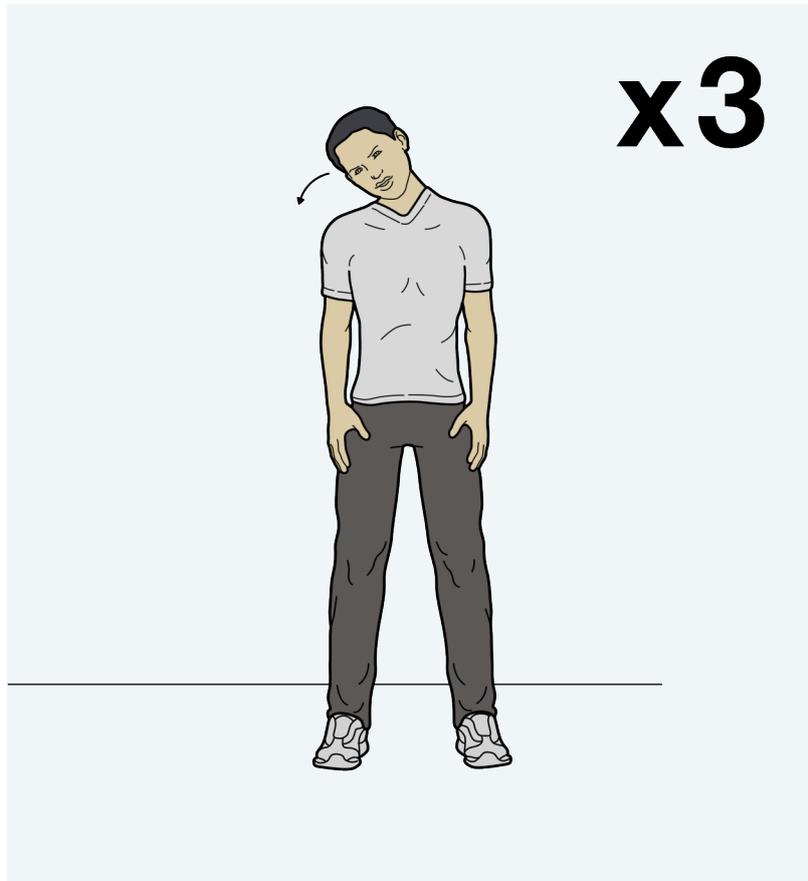
*Where did you feel your body touching the floor? Point to that part of your body.*

4. Now repeat the activity, but this time rock sideways instead.

*Does it feel different?*

*Where did you notice it this time when you were rocking sideways?*

5. Now choose to either rock forwards and backwards or sideways. Focus on how your body feels when it is rocking.

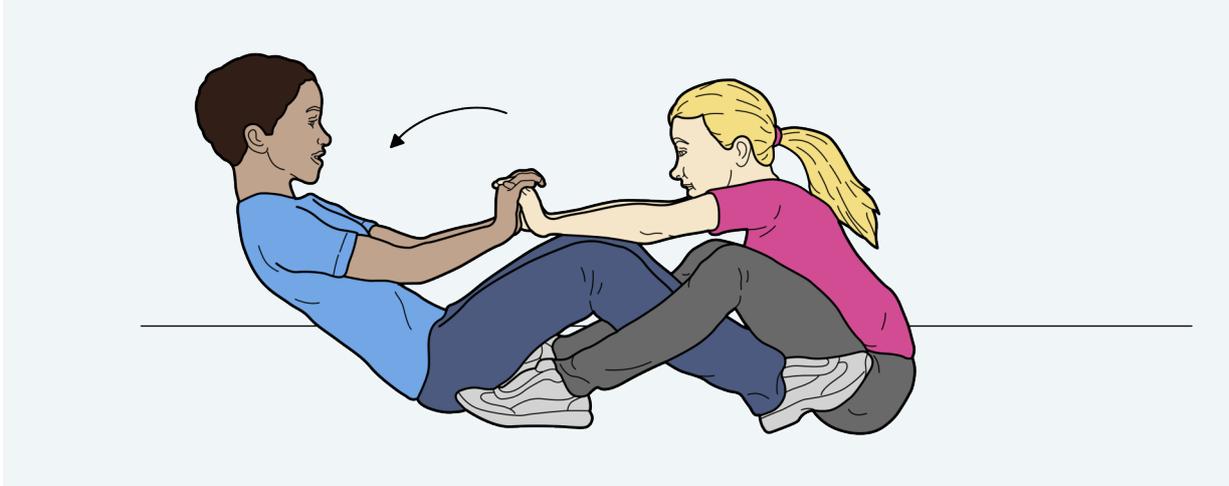


1. For this activity either stand up or sit in a chair.
2. First, slowly tilt your head side to side three times. Tilt it to one side of your body and then slowly tilt it to the other side of your body.
3. Now turn your head from side to side three times. Slowly turn your head to the left, then back to the middle, then turn your head to the right.
4. Now repeat the activity but this time focus on the part of the body you identified in step 3.

*Where did you feel it in your body this time doing the stretch?  
Did you feel it in the same place or somewhere different?*

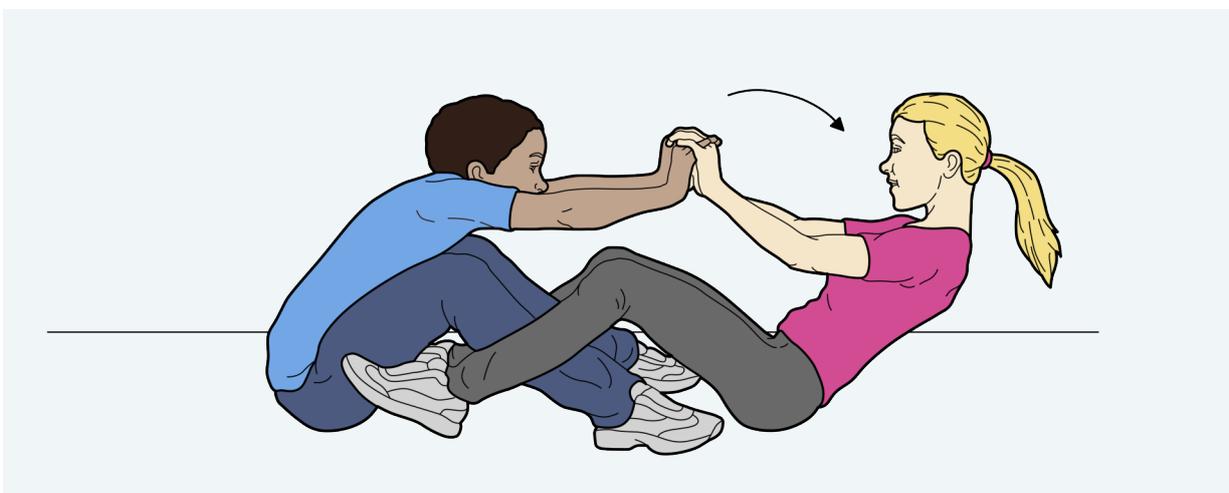
# Activity 29: Row, row, row your boat

Video demonstration



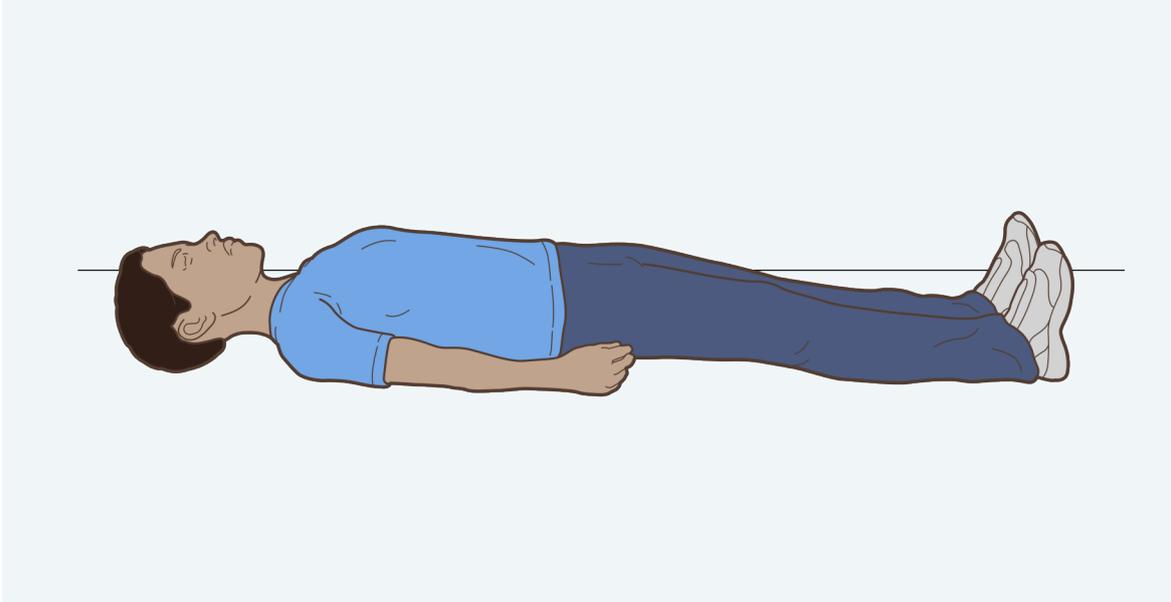
1. Find a partner and sit on the ground facing your partner.
2. Start singing the lyrics to the song 'Row, row, row your boat' with your partner:

**Row, row, row your boat,  
gently down the stream,  
merrily, merrily, merrily, merrily,  
life is but a dream.**



3. As you sing the song, put your hands up against your partner's hands, have your knees slightly bent.
4. Push your hands against your partner's as you rock backwards and forwards in a 'rowing motion'.  
*Where did you feel it in your body as you were rowing?*
5. Now repeat the rowing movement with your partner but this time focus on one of the body parts you identified in step 4.

*Where did you feel it in your body this time while rowing with your partner? Did you feel it in the same place or somewhere new?*

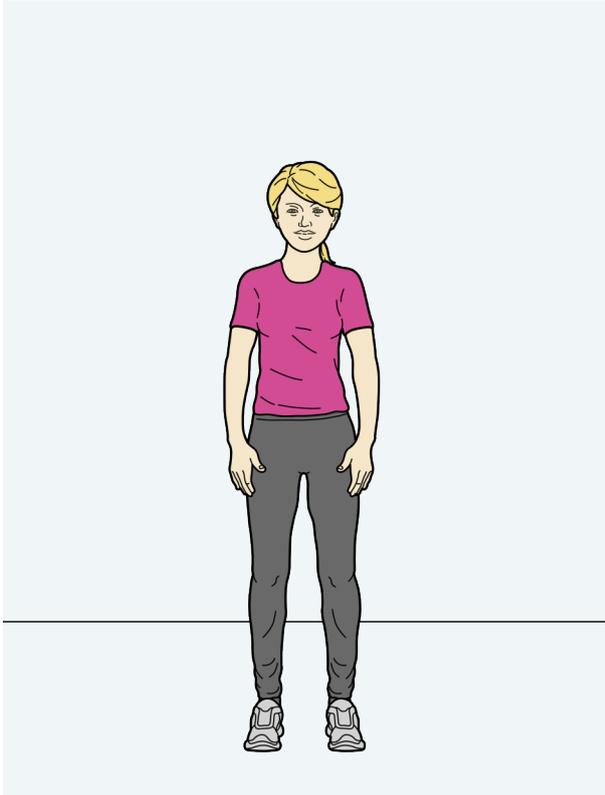


1. Start by laying down on the floor with your hands by your side.
2. Tense and relax each muscle group for two to three seconds. At the same time, take deep, slow breaths in through your nose and out through your mouth.
3. Start with your feet and toes. Tense then relax.
4. Move up to your knees and thighs. Tense then relax.
5. Move up to your stomach. Tense then relax.
6. Clench your hands. Tense then relax.
7. Move up to your arms. Tense then relax.
8. Move up to your shoulders. Tense then relax.
9. Move up to your face. Tense then relax.
10. Now repeat the activity focusing on how each body part feels when it is tensed compared to when it is relaxed.

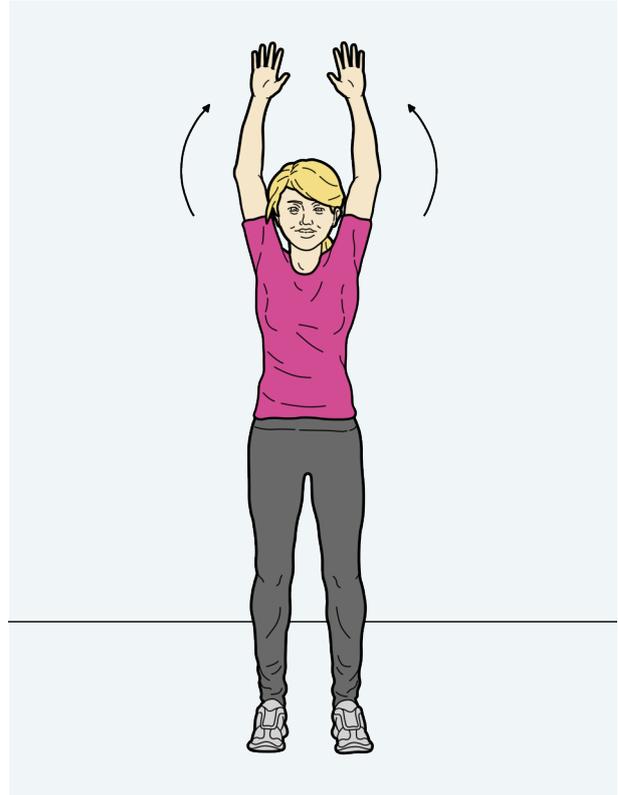
*Which part of the body felt most different when it was tensed versus when it was relaxed?*

# Activity 31: Rainbow breathing

Video demonstration



1. Start in a standing position with your hands by your sides.

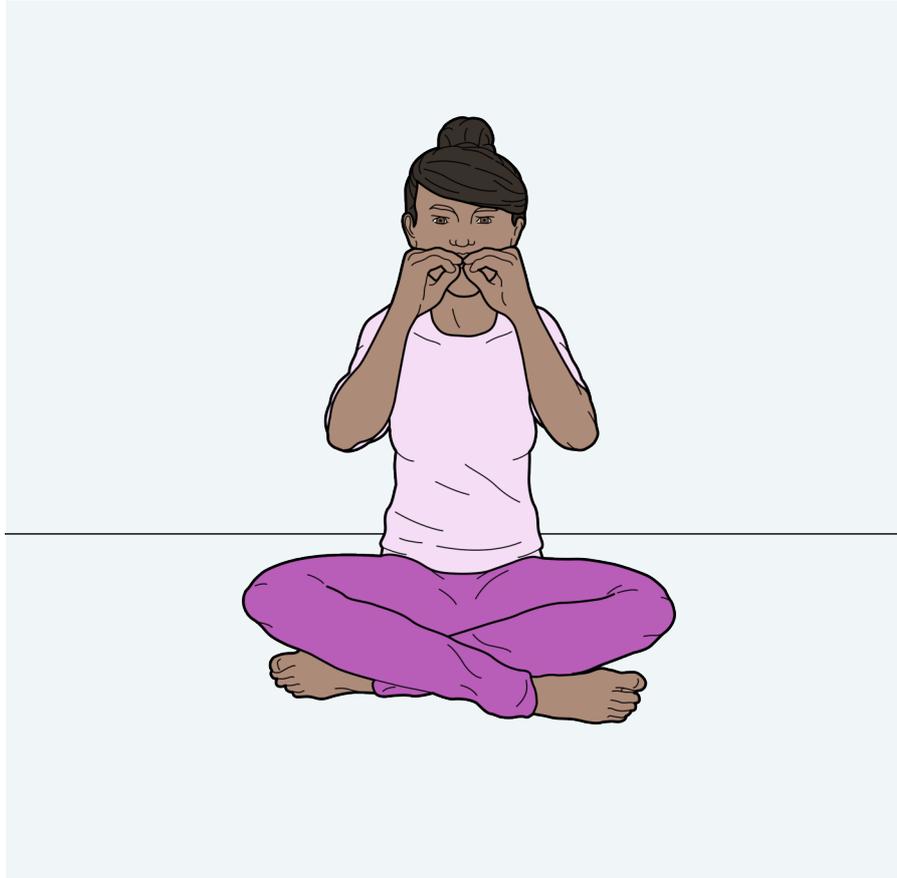


2. Take a deep breath in through your nose. As you do, raise your arms up over your head making a rainbow shape.
3. As you breathe out through your mouth, move your arms back down to your side.

*Where did you feel it in your body?*

4. Now repeat the activity but this time focus on breathing in through your nose and out through your mouth.

*What change did you notice in your body after focusing on your breathing?*

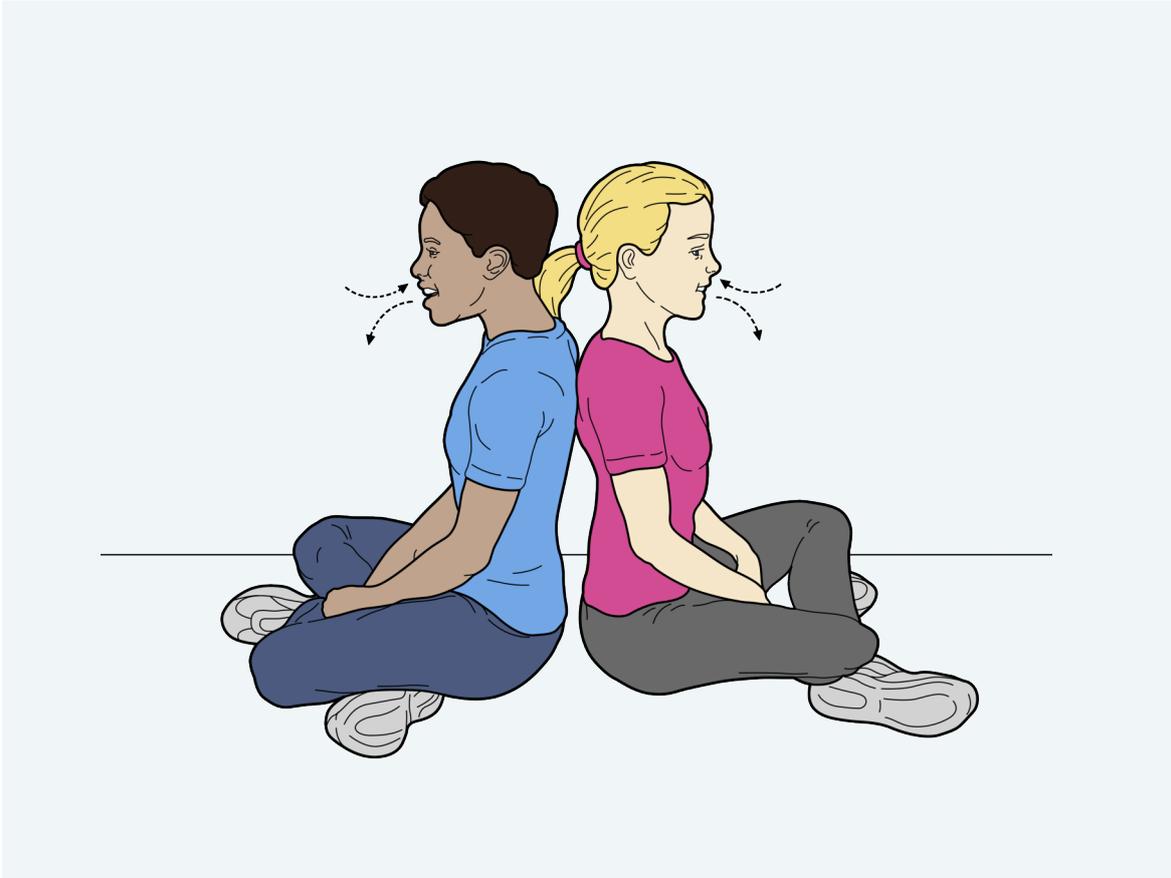


1. Start by sitting cross-legged on the floor or sitting on a chair. Put your hands up to your mouth as if they are holding an imaginary balloon.
2. Take a deep breath in through your nose and slowly start to blow out through your mouth.
3. With your hands, extend them out as if you were blowing up a balloon.

*Where did you feel it in your body?*

4. Now repeat the activity, but this time focus on breathing in through your nose and out through your mouth.

*What change did you notice after focusing on your breathing?*



1. Find a partner and sit on the floor cross-legged, back to back. Sit up tall and close your eyes if you want to.
2. Start to breathe in through your nose and out through your mouth.

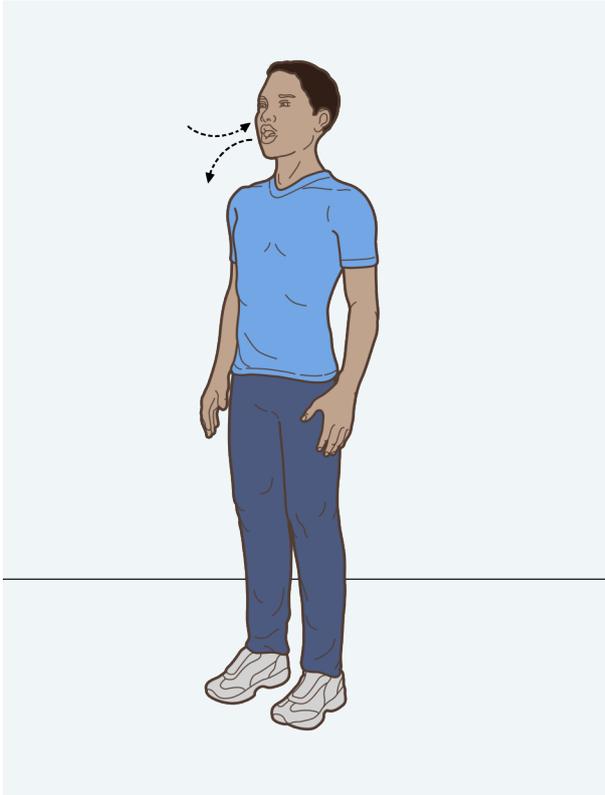
*Where did you feel it in your body?*

3. Now repeat the activity, but this time focus on syncing your breath with your partner by feeling the movement in your partner's back.

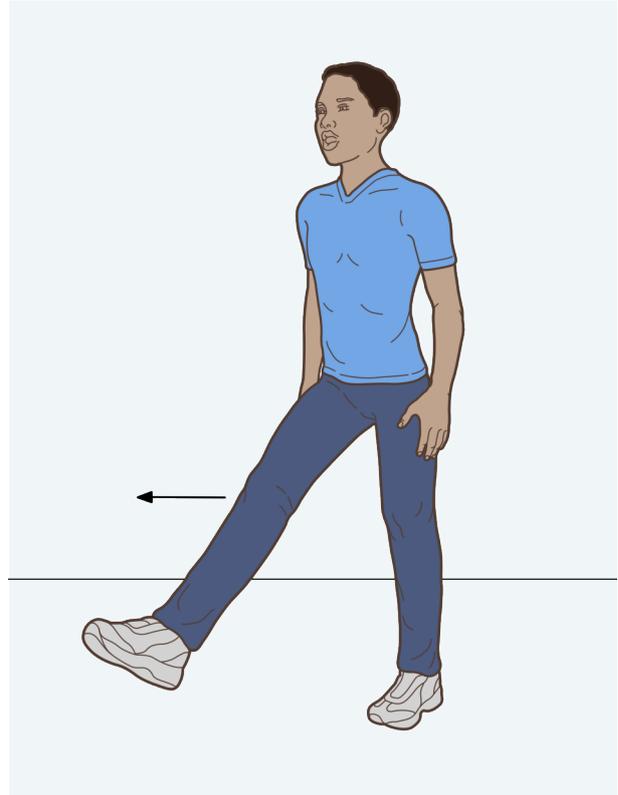
*What change did you notice in your body after focusing on trying to match your breathing with your partner's breathing?*

# Activity 34: 10 steps breathing

Video demonstration



1. Find a space in the room and stand tall.



2. Take a deep breath in through your nose and out through your mouth. Once you have done this, take one big step forward.

3. Repeat 9 more times.

*Was it comfortable to breathe like this while taking the steps?*

4. Now repeat the activity, focusing on your breathing, in through your nose and out through your mouth.

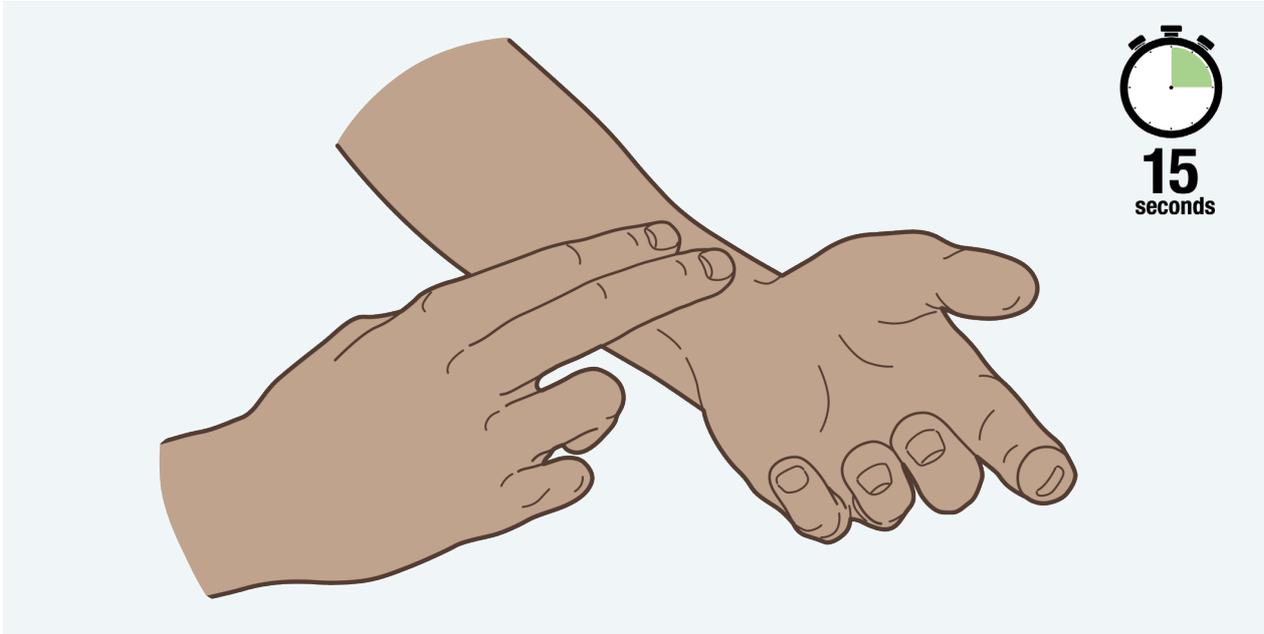
*What change did you notice in your body after focusing on your breathing?*

# Activity 35: Feeling pulse

Video demonstration



Your heart is a pump which pumps blood around your body through your arteries. Where the arteries are close to your skin you can feel the blood moving; this movement of your blood is called your pulse. You can feel your pulse in several places by gently feeling an artery with your fingertips. You can count your pulse to work out how fast your heart is beating; this is called your heart rate. The easiest place to feel your pulse is on your wrist.



1. Sit down and rest your hand on your leg with your thumb up in the air and your palm facing up.
2. With the first two fingers of your other hand, stroke from the top of your thumb down the side until your fingers reach your wrist.
3. Move your fingers slowly onto the inside of your wrist, and gently feel for your pulse.
4. When you have found your pulse, you can count how many beats in 15 seconds.
5. How does your pulse feel? Is it fast or slow? Is it hard or soft?

(Students who are able can multiply their score by four, which will give them their heart rate per minute.)

## Follow-on activity:

Jump up and down or run on the spot for one minute. Now find your pulse again and count the beats for 15 seconds.

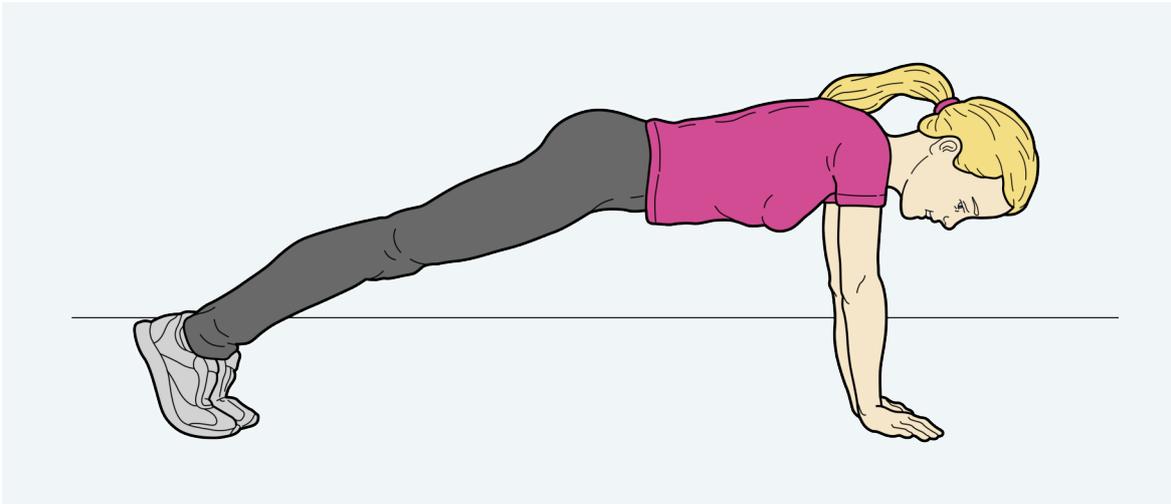
*Is your pulse higher or lower than before you started jumping or running? When else does your heart rate/pulse change? Does your pulse feel stronger or softer now? What happens if you run and/or jump for longer? What happens to your heart rate if you lie down and relax for a minute? What can you do to lower your heart rate/pulse? Why would you want to? Does your breathing change when you run/jump? Does it change again after you have stopped running/jumping?*

# Activity 36: Mountain climber

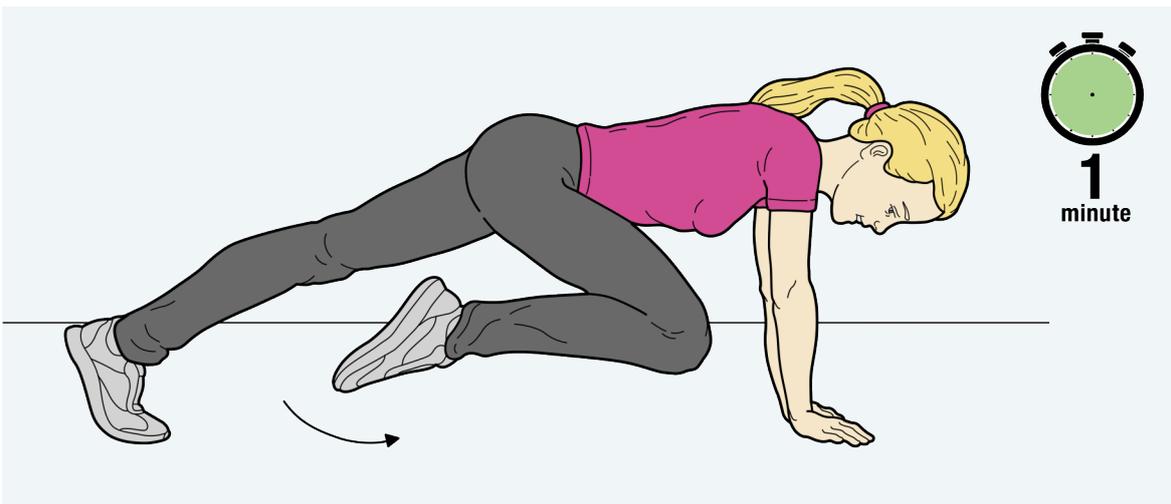
Video demonstration



1. In a standing or sitting position, find your pulse on your neck or wrist. Record your pulse for one minute.



2. Move down into a plank position, with hands and feet on the floor, and your body straight.



3. Pull your knee into your chest, while staying in the plank position.
4. Now switch knees. Alternate, pulling the knees in right, left, right, left, to create a 'running' motion. This is called the 'mountain climber'. Do this for one minute.
5. Stand up and find your pulse on your neck or wrist. Record your pulse for one minute. (Younger students who cannot count reliably may use smart watches or pulse oximeters for this activity or they can simply be guided to notice the quality of their pulse, e.g. hard/soft, fast/slow etc.)

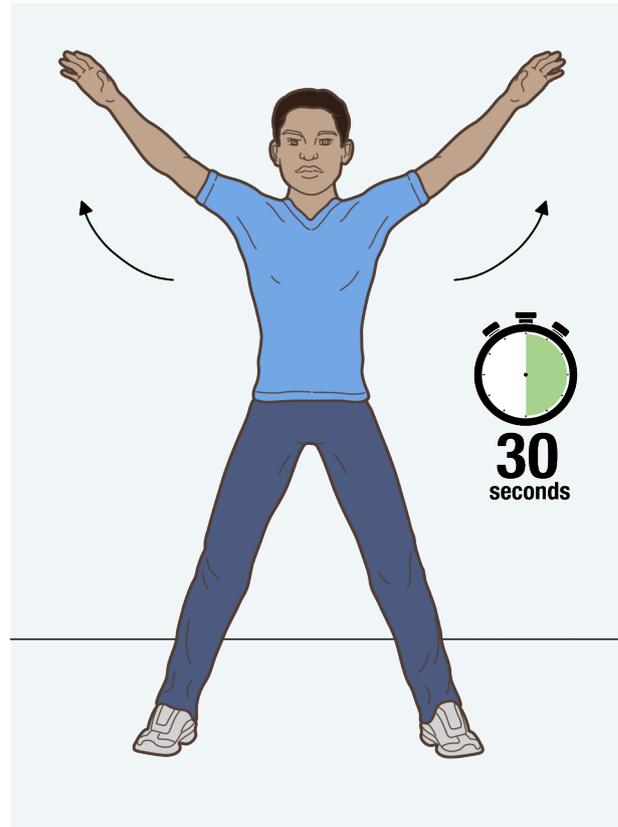
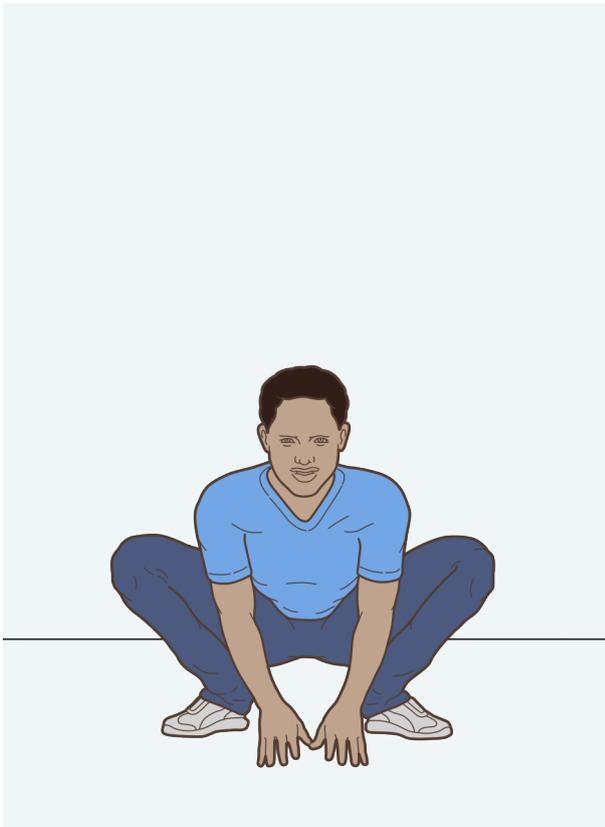
*What did you notice about your pulse after completing the mountain climber activity compared to your pulse before the activity? Did the pulse feel different as well as feeling quicker?*

# Activity 37: Frog squat jump

Video demonstration



1. In a standing or sitting position, find your pulse on your neck or wrist. Record your pulse for one minute.



2. Stand tall with your feet a little wider than hip width and slightly turned out. Squat down into a frog position and place your hands on the ground between your legs.
3. Spring off your bent legs, throwing your arms into the air. Repeat this squat and jump action for 30 seconds.
4. Stand up and find your pulse on your neck or wrist. Record your pulse for one minute. (Younger students who cannot count reliably may use smart watches or pulse oximeters for this activity or they can simply be guided to notice the quality of their pulse, e.g. hard/soft, fast/slow etc.)

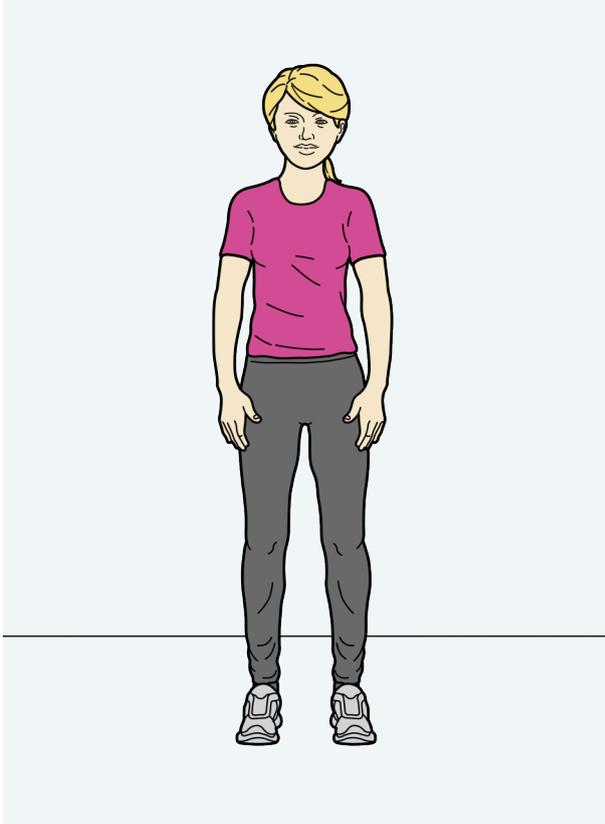
*What did you notice about your pulse after completing the frog squat jump activity compared to your pulse before the activity? Did the pulse feel different as well as being quicker?*

# Activity 38: Jumping jacks

Video demonstration



1. In a standing or sitting position, find your pulse on your neck or wrist. Record your pulse for one minute.



2. Stand with your feet together, knees slightly bent and arms at your side.

3. Now jump while raising your arms and separating legs out to the sides, landing with legs apart and arms overhead.

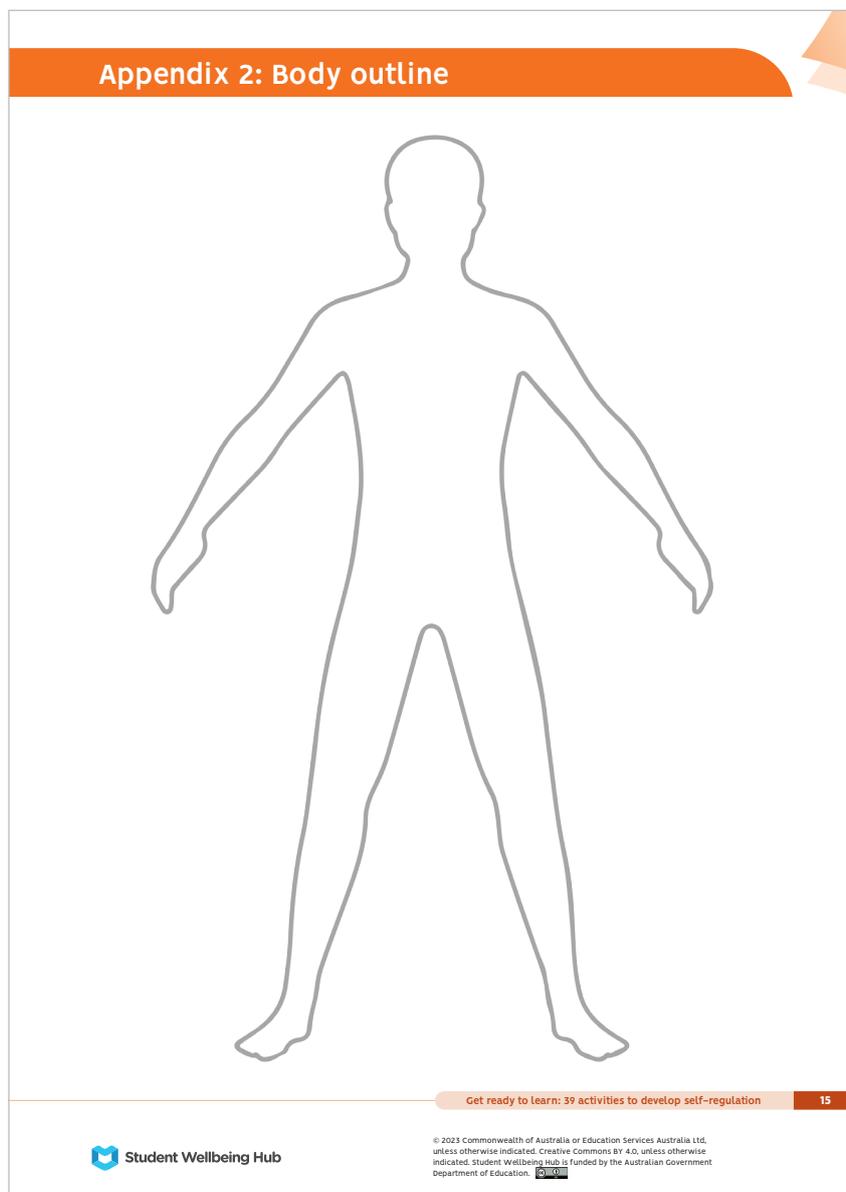
4. Repeat the jumping jacks for 30 seconds.

5. Stand up and find your pulse on your neck or wrist. Record your pulse for one minute. (Younger students who cannot count reliably may use smart watches or pulse oximeters for this activity or they can simply be guided to notice the quality of their pulse, e.g. hard/soft, fast/slow etc.)

*What did you notice about your pulse after completing the jumping jacks compared to your pulse before the activity? Did the pulse feel different as well as being quicker?*

# Activity 39: Regulating body temperature

1. Provide students with an outline of a body drawn on a blank piece of paper (see [Appendix 2](#)).
2. After coming inside from play, ask students to sit and notice where inside their bodies they feel heat.
3. Ask each student to circle on the body outline where they are noticing heat. For example, they could feel that their face feels hot, or their underarms feel hot and sweaty.
4. Ask the students to share where they noticed the heat.  
*Discuss strategies they can use to cool down. For example, take their jumper off; have a drink of water; turn on the air-conditioner.*  
*It may be useful to use a mirror to show students their body cues. For example, use a mirror to show students that their face is red, they are puffing and they are sweating. These body cues show the body is hot and needs to cool down.*



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