



YOÜ

Teens' self identification toolkit for spinal diseases


YOU is a physical & digital health assessment kit that empowers teens to know about their spinal health through storytelling and postural measurement tools. Then aims to help users with customized suggestions based on their health assessment. The whole service aims to use early identification to raise the bottom line of scoliosis treatment and educate young people with the understanding of others and remove the taboos by nurturing self-love towards body positivity.

It is a useful resource for young people to take care of and get to know their body & spine health in every aspect. We would like to hear more from you to define our users' needs better. Please refer to our QR code and the website at the end of this booklet.

Notice:

- It requires a trusted adult to accompany the young user during the participation and learn together.
- This booklet you are reading right now was published with the approval of our consultant doctors on the field. The measurement here is not to provide an accurate diagnosis. Please do take it as an important reference and consult with your GP or specialist before any conclusion.
- For any inquiry, please contact us from here.
- The project led by the Royal College of Art.

Content




Let's learn more about our body and skeletal system

Spinal Health introducing



Let's have a quick check on our spinal

Scoliosis physical examination tool kit



Let's find out what we should do next

Further suggestion and exercise tips



Find out more

Website and social campaign

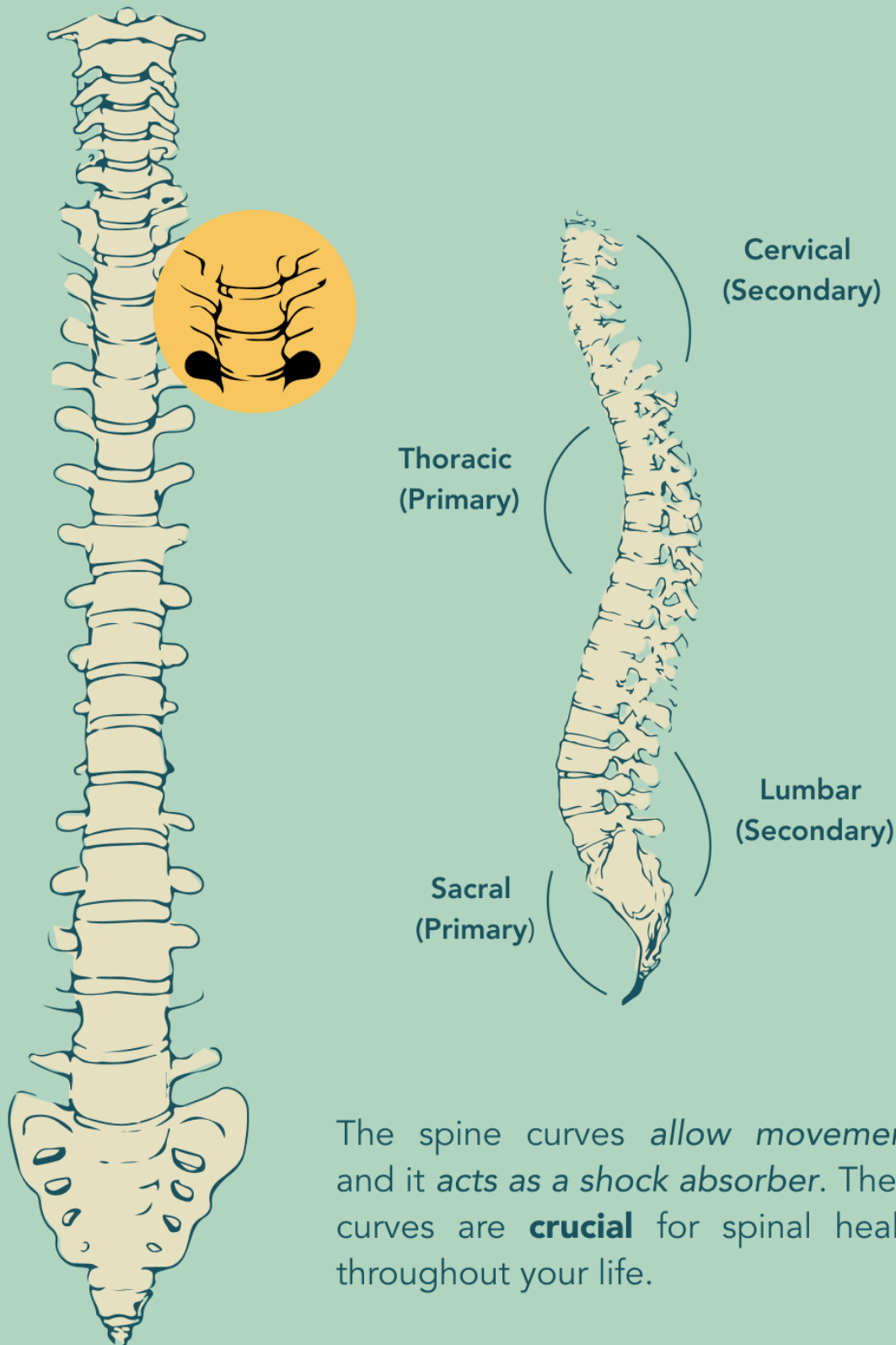
Section 1

In this section, we will share some *interesting information* about **your spine** and **how it works**. At the end of this section, you will understand the spinal conditions and the disease "**Scoliosis**" which *may occur at your age*, hence, why you should **take good care** of your body. If you're ready, let's start!



Mind if I join you?
For all of those **nice moves**,
you can say thanks to your
spinal curves!

Your spine is the larger member of the skeleton, which is a **key structure** of your nervous system. It has two main curves. **Primary curves** articulated with ribs to *protect your lungs and your heart*.



The spine curves *allow movement*, and it *acts as a shock absorber*. These curves are **crucial** for spinal health throughout your life.



When you walk or run, there's contact between your spine and the ground. *By hitting* with your weight, it *creates a force* that **your spine** is able to **disperse**. This is necessary if you don't want that force impacting your brain and other organs. But also important for your **body posture**.

A fully formed spine is usually expected with a good posture that comes naturally when your body maintains a balance with minimum muscle effort. But anyone can experience abnormal spine curvature in primary curves caused by poor posture or spinal diseases over time.



For example, some poor postures are spotted **more common** for *males* or *females*. While **Kyphosis** is more frequently seen in males,

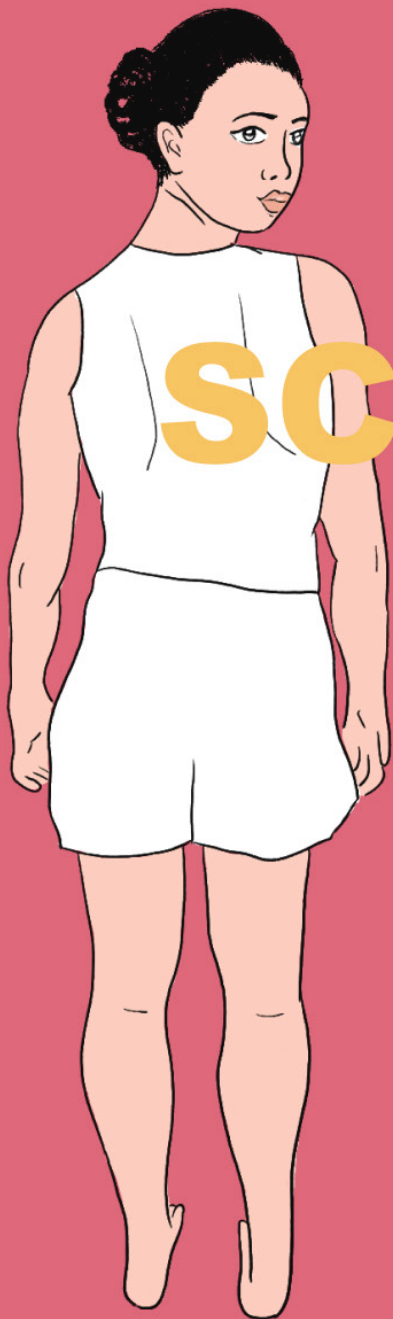
Lordosis reported more in women since they can give birth.





Due to spinal conditions, your **appearance may change**. As a natural process, we age, and our body changes. You can imagine it *like making pottery*. Each of us can take irregular shapes over time that makes us **unique** and **embraces beauty** in itself.

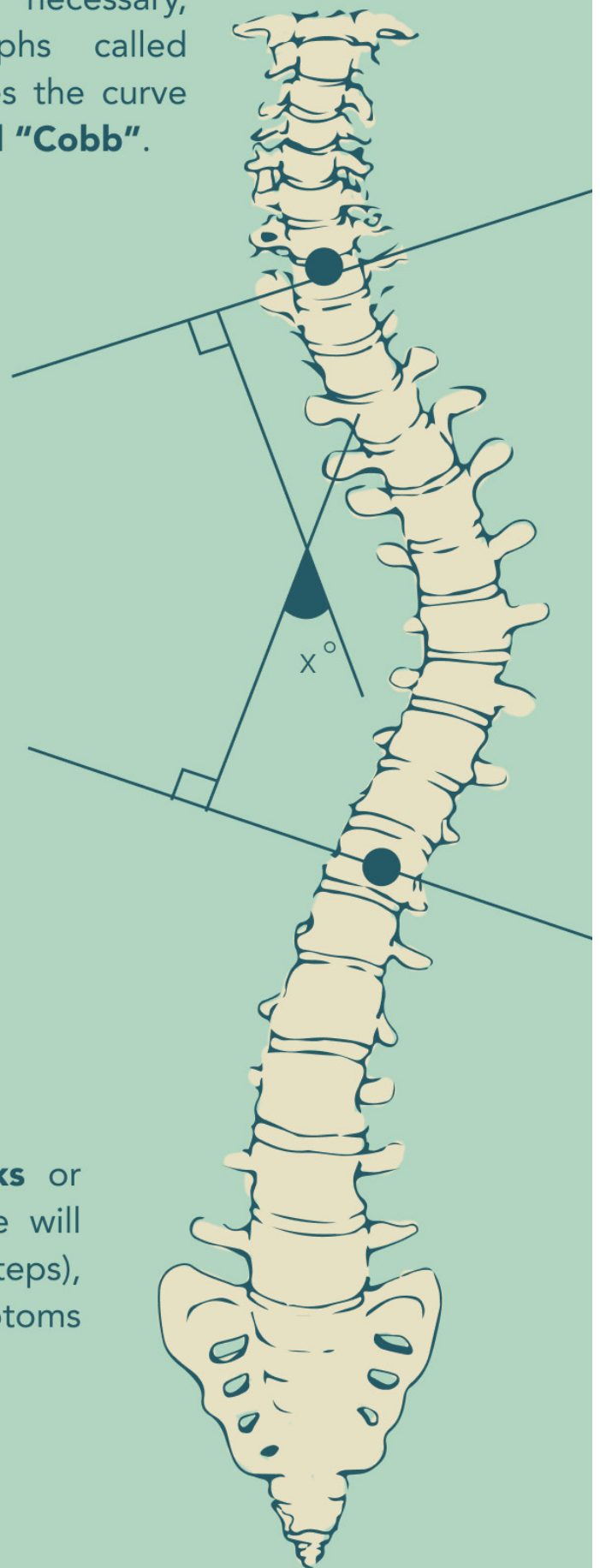
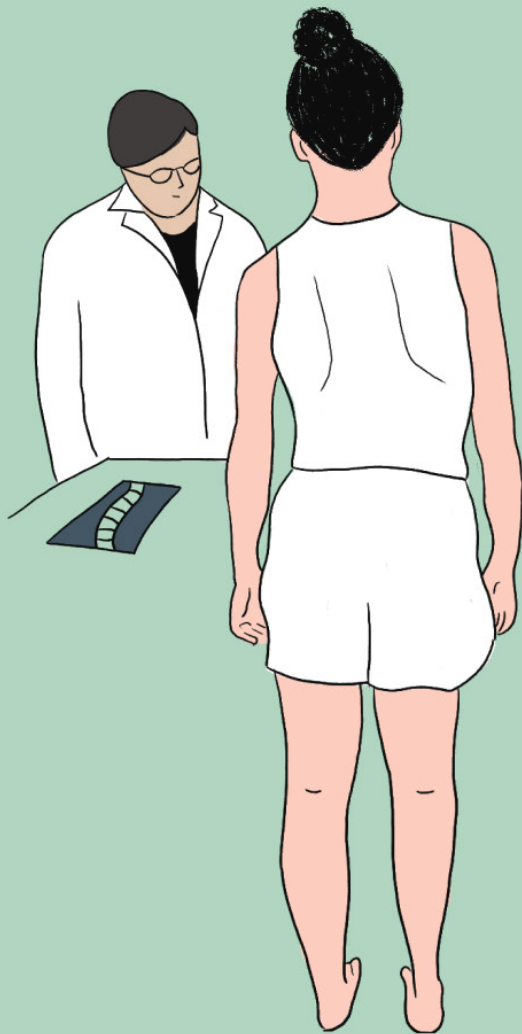
WHAT IS THIS THING CALLED SCOLIOSIS ?



Let's talk about the **most common** spinal disease called Scoliosis. The exact cause for this condition is unknown, but research suggests that *early identification and treatment* **have vital importance** for your age group to stay healthy throughout your life.

Scoliosis is a condition where the spine twists sideways and takes an "**S**" shape. There are **contributing factors** to Scoliosis, such as your *genes* or *rapid growth* at the time of **puberty**.

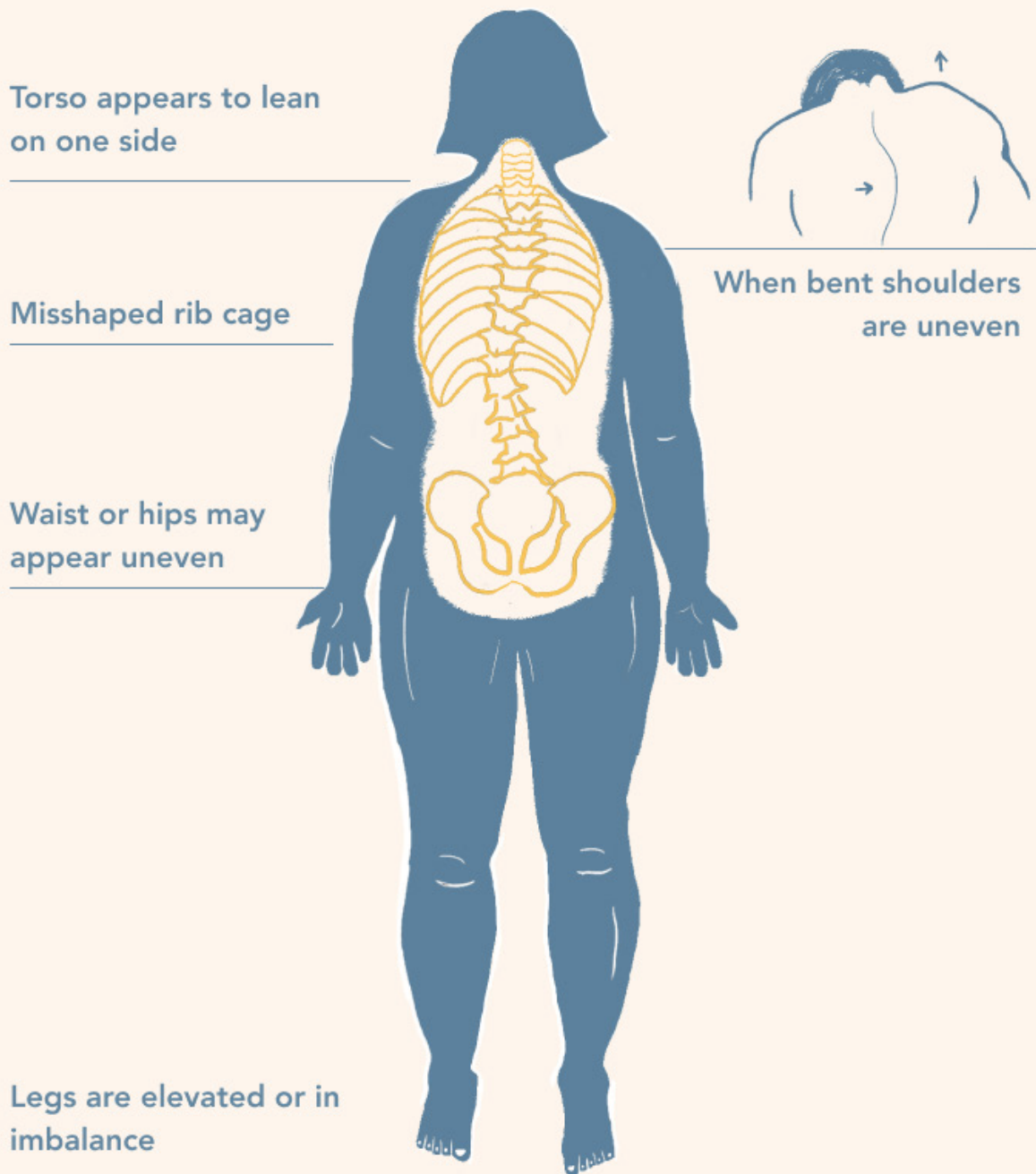
If the doctor finds it necessary, physicians take radiographs called "**X-Ray**" and then calculates the curve degree with a method called "**Cobb**".



With **regular health checks** or **simple methods** (which we will provide some in the next steps), you can diagnose your symptoms early.

What happens if the curvature gets bigger?

This means that you may have chronic pains in your back or the lower areas, which may affect how your lung works, or it may alter your body mechanics so you can experience some changes in your body posture or appearance.



Let's think of this as an X-Ray of an adult with Scoliosis



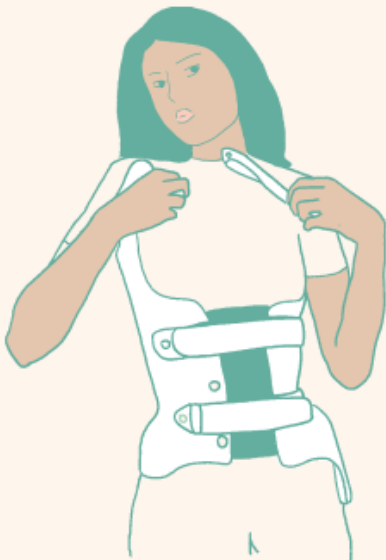
There are non-surgical or surgical methods that exist to treat Scoliosis. **If you did spot your symptoms, your doctor would suggest three common methods to treat your Scoliosis.** Then with the guidance of your specialist, you can support your body with appropriate exercises to relieve the tension and strengthen your muscles.

The three options will be **observation**, **bracing**, and **surgery**.



Observation

If you have a slight curve that is less than **20 degrees**, it needs to be observed over time. *Every six months*, you should give a visit to your doctor to check if the spine is getting any bigger.



Bracing

If your curve got more significant, that is, between **20-50 degrees**, it needs to be treated with a *bracing*. To see the treatment works efficiently, you may need to use it during your growth. It sounds like a long journey, but with motivation, you can train your spine *with the right alignment* at the end.



Surgery

With greater than **50 degree** curves, you can choose to have *surgery*. Surgery will help you to correct your curve before it gets any bigger. It is okay to take time and get help before making any decision. You can *discover your options* with your surgeon to see what's best for you.

It is also important to remember that there might be **people around you** who are already dealing with such deformities. This could be your family member, your peers, or even a stranger at the grocery store. Since you know how **challenging** this process could be, you can show your **support** and try to **understand** those around you who are coping with this situation.



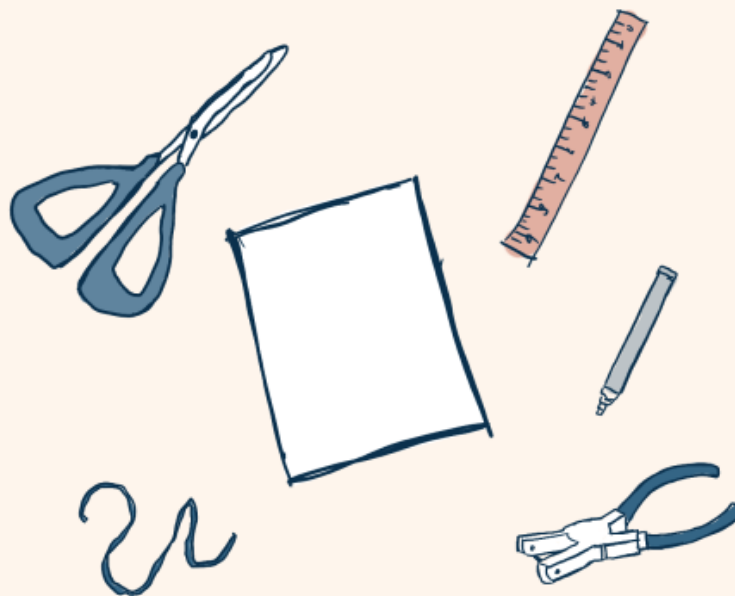
Not everyone will have Scoliosis, but anyone **between the ages of 10-16** is **at risk of** developing *spinal deformities*. One reason for that is early symptoms are **easy to miss** until most young people reach to their adulthood. Therefore, you need to **observe your health** and body closely so that you can take good care of them. So let's start to use some tools together and see your spine's current condition and what you can do to have a healthy body and posture.



Section 2

There are tools in the book that could help you understand more of your body and find out what you should do next.

Follow the guideline to make your own tool



You might need to prepare
a scissor, ruler, pen, hole puncher and a rob

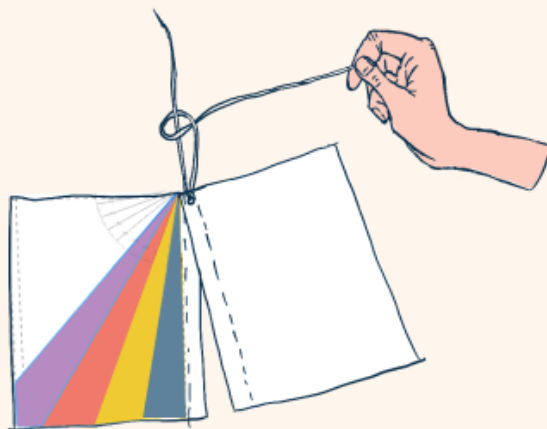
The first tool is

Protractor

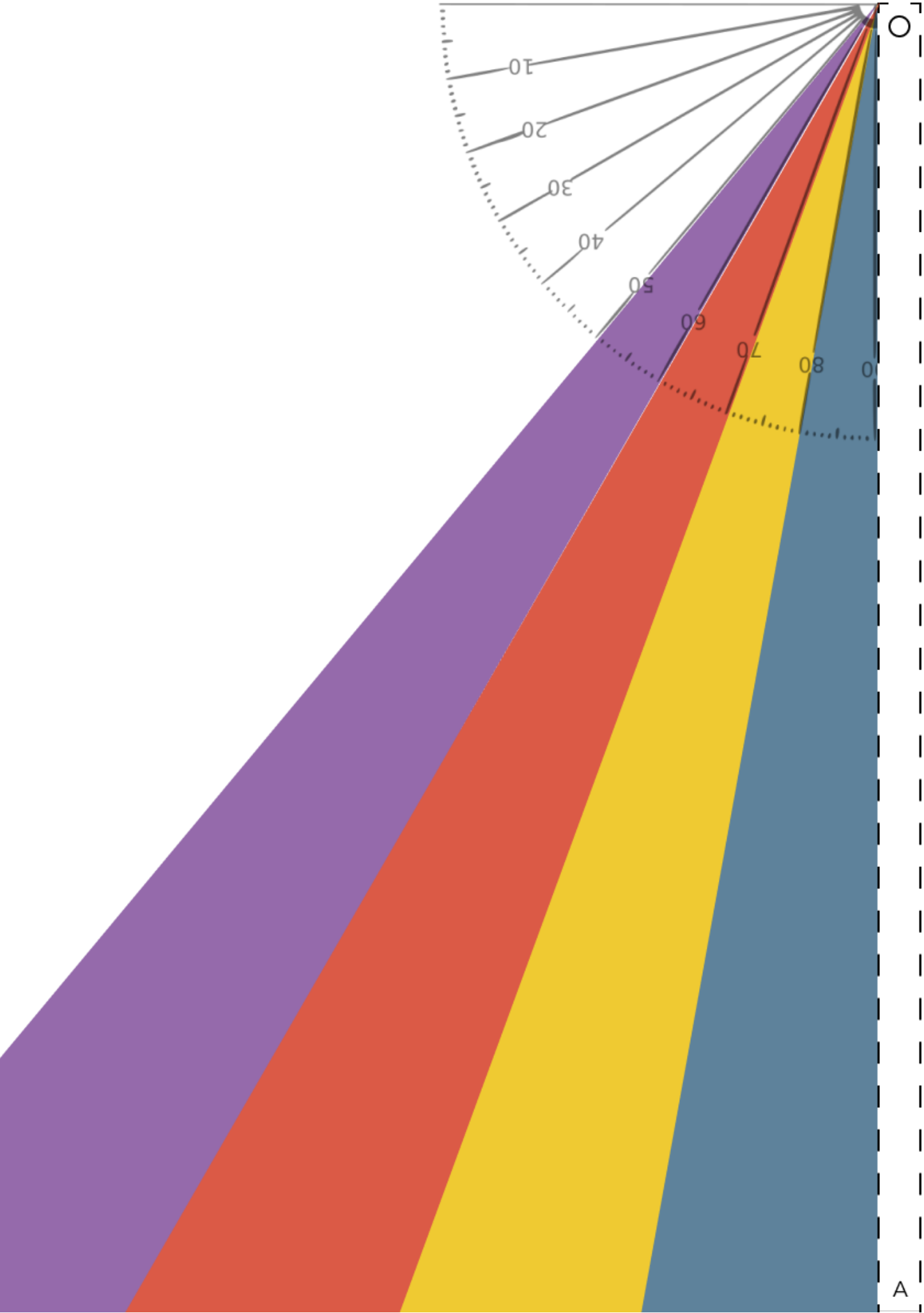
1: Take out the appendix pages A1 and A2, cut out a hole in the place as it is indicated on the page



2: Find a rob to tie them together, as showing below











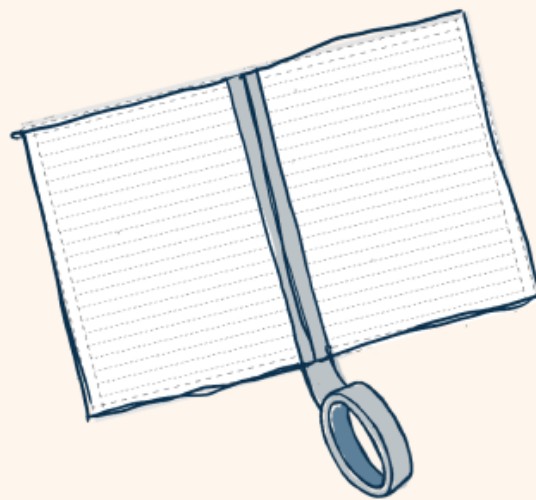
A



The second tool is

Grid

1: Take out page A1 and A2, and tape them together at the back



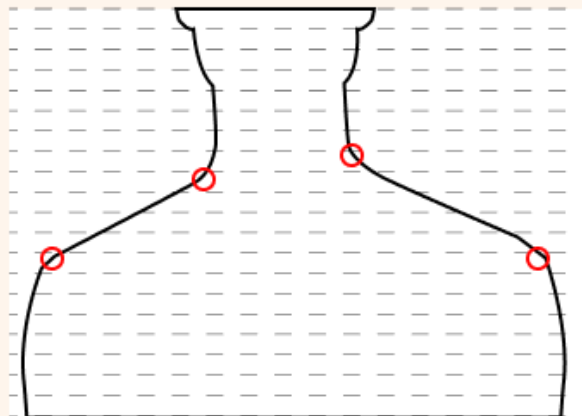
2: Use a pen to trace your shoulder and neck on the grid (try to keep the pen vertical on the grid all the time)

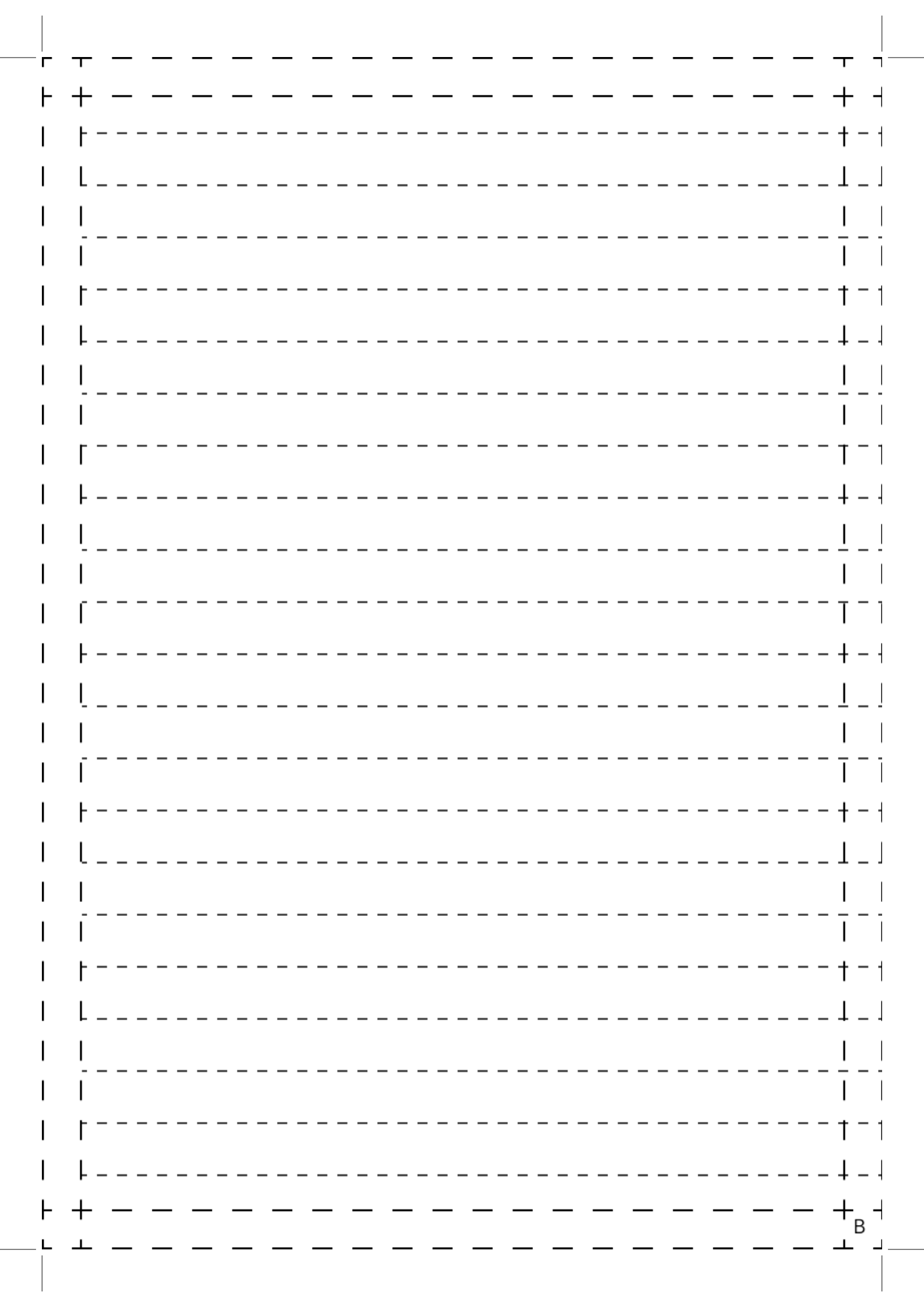


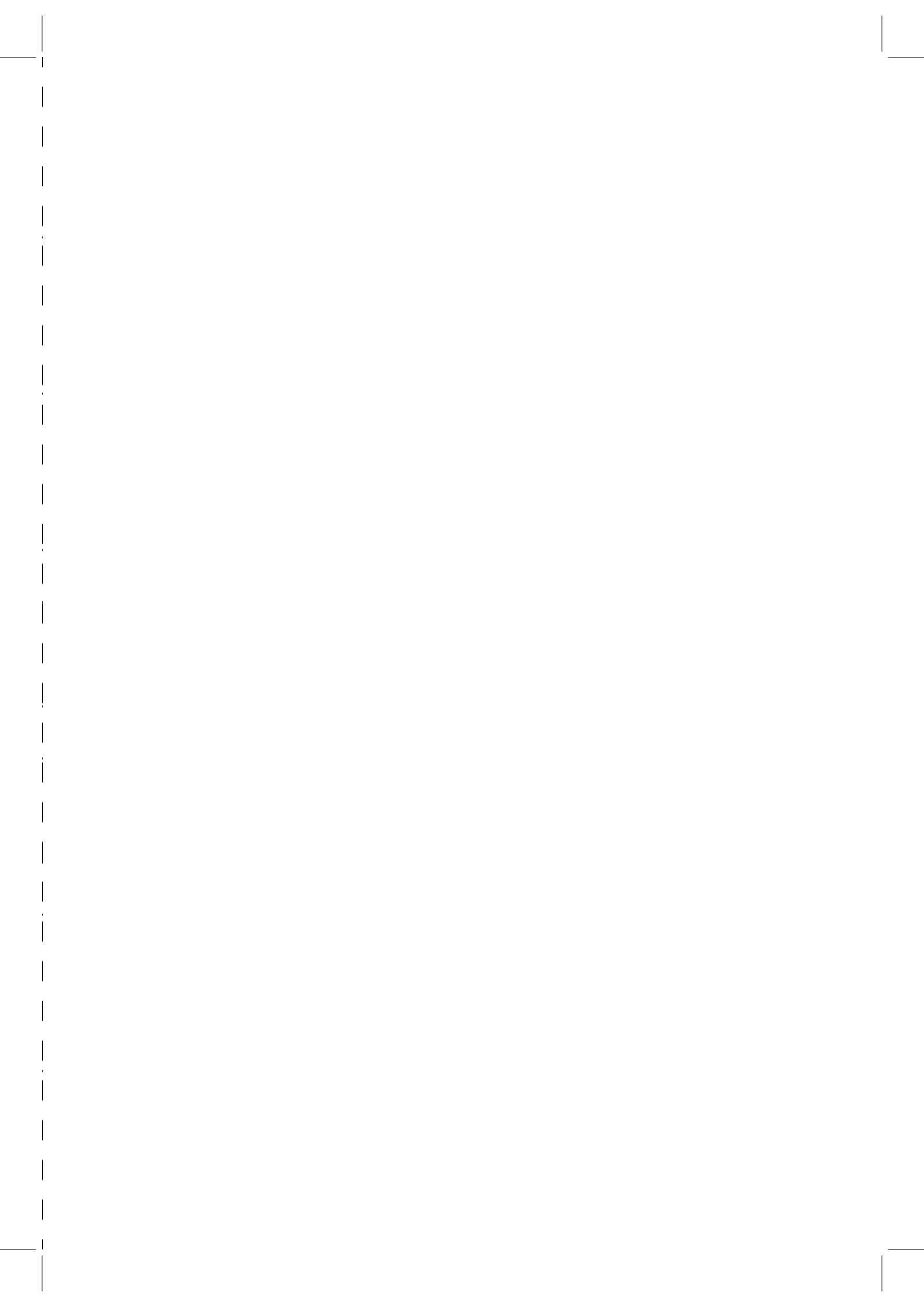
3: Mark out the turning point of your neck and shoulder line on the grid

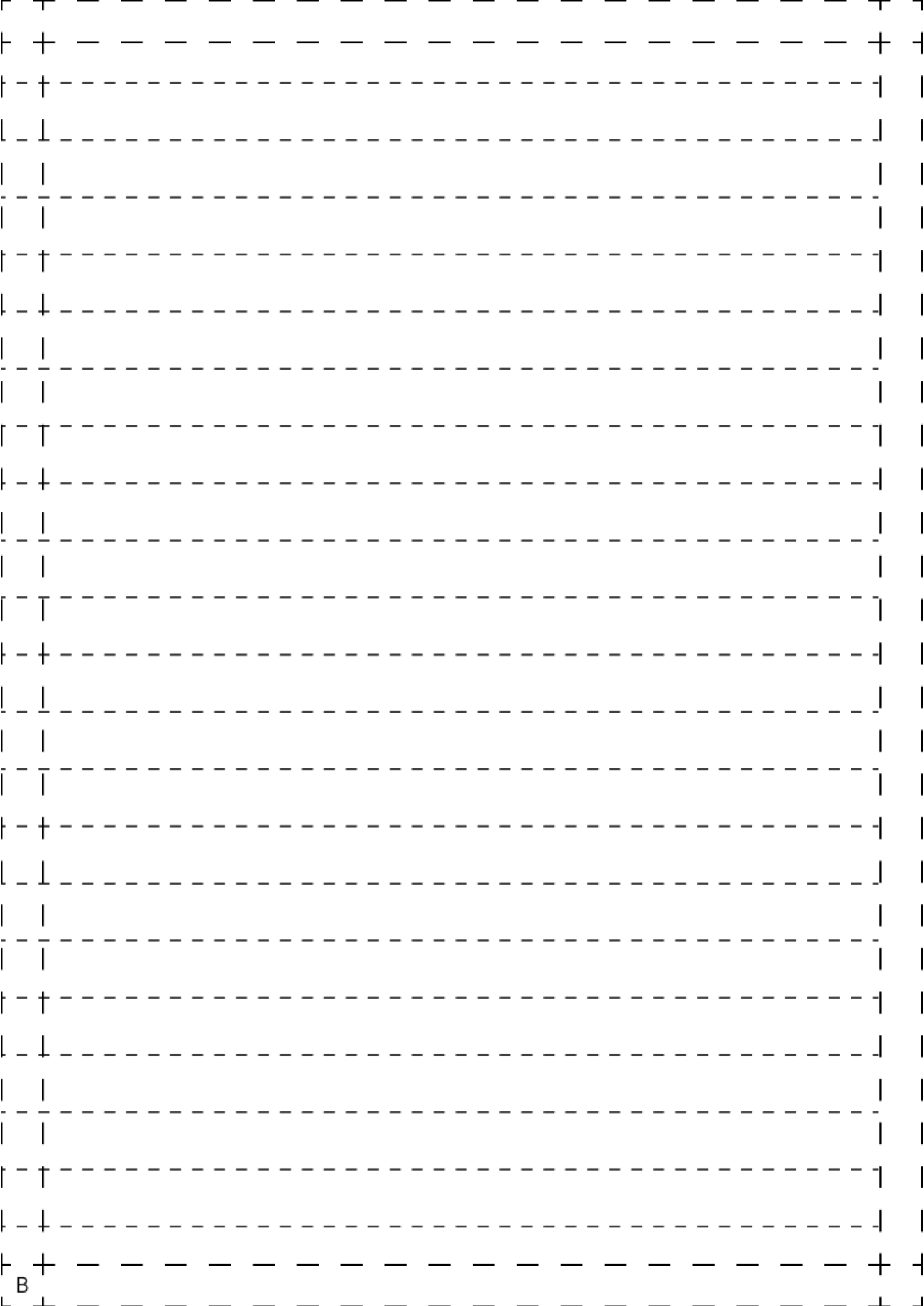


4: Find out how many grids are the difference between the right side and left side

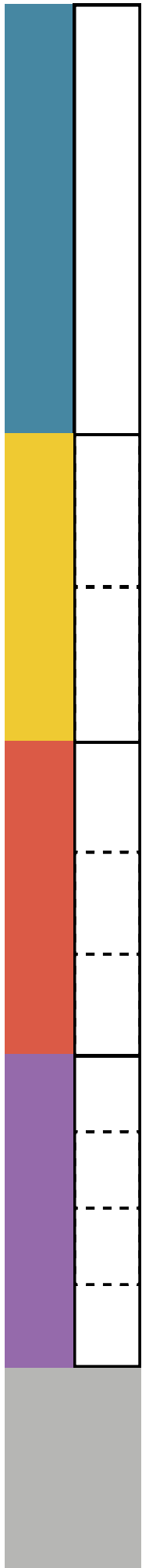






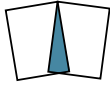






If you get

Then you are



Blue Pallet



1 Grid



Your body is aligned and behaving well. You can join your friends to do the exercise together in the next session.



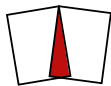
Yellow Pallet



2 Grid



Your body is exploring. Doing stretches can release the muscle tension. It'd be better if you get a healthcheck and an advice from your doctor.



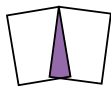
red Pallet



3 Grid



Your body is changing. You can release the pain in your back, with the appropriate exercises. It will be better to start a treatment or update your doctor.



purple Pallet



4 or more Grid



Your body is special, and it might look different from others. You can discuss your options with doctor and always seek help from your parents or trusted friends.


If you have a different combination of color and grid


We need one more step to find out what you should do next

Please answer the following questions

- 1: Have you ever feel pain from your back or chest?
- 2: Are you much heavier or thinner than the average of your peers?
- 3: For the Pallet tool, did you get red or purple?
- 4: Are you much taller than the average of your peers?
- 5: For the grid tool, did you get 3 or more differences in the grid?

If you have 3 or more "Yes" out of 5,

then you are 

Otherwise, you are 

Now, please return to the previous page to find out what you need to do next.

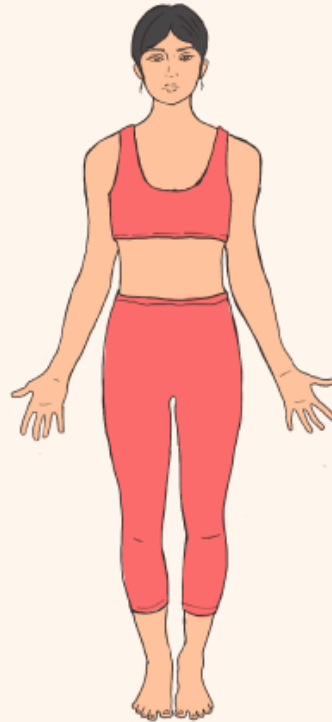
Section 3

This section has postural tips for you! It contains 4 easy yoga poses and some methods that all colour groups can try at home with a yoga mat or a thick towel. Any stretch exercise is helpful for our postural behaviours.

Besides, there are further suggestions for each group that is worth reading with your parents or friends and taking the notes in consideration of those you think are helpful.

1: Mountain pose

The foundation of all standing poses, Mountain Pose, makes a great starting position, resting pose, or tool to improve posture.



1: Stand with your big toes touching and your heels slightly separated (inverted V shape).

2: Concentrating on your feet, lift up onto the balls of your feet and then your toes. Settle back down flat and find your balance.

3: Lift your pelvic bone slightly toward your navel.

4: Relax your facial muscles and take slow breaths. If possible, practice diaphragmatic breathing methods with inhalation through your nose, allowing your stomach to move out (and diaphragm expand), and exhalation through pursed lips

2: Tree Pose

Another standing pose strengthening your core and improving your overall balance. It is also helpful for stress reduction.



1: After doing the mountain pose, shift your weight to your left foot. With your right hand, reach down and grab your right ankle.

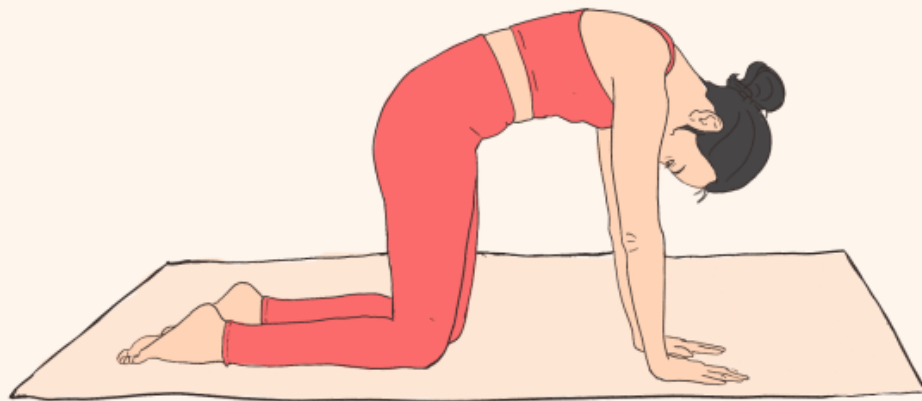
2: Lift your right foot and place the sole of your foot against your left thigh.

3: Stretch and lengthen your spine. Draw your pelvic bone inward and point your tailbone toward the floor.

4: Gaze forward and take slow and steady breaths. Stay in this pose on your left leg for 30 seconds, slowly working up to one minute. Repeat with your right leg.

3: Cat / Cow pose

This pose opens up the spaces between your vertebrae and stretches the muscles and tendons that support your spine.



1: Begin on all fours with your hands below your shoulders and your knees below your hips (also known as tabletop pose).

2: Look down towards your yoga mat and spread your fingers. Engage your abdominal muscles.

3: As you inhale, lift your head and tailbone, making your lower back concave.

4: As you exhale, tuck your tailbone, release your neck, and gently drop your head while rounding your back and neck.

4: Child Pose

This is a relaxing pose and is best to do after the cat/cow pose.



1: Begin seated on your heels. Stretch your arms and hands out in front of you.

2: Bend your upper body forward and lower your chest close to your knees. Continue to stretch your arms forward until you feel a comfortable stretch (and no pain).

3: Take deep breaths and relax as you feel your back and spine muscles lengthening.

4: Relax your entire body. Stay in this pose for 30 seconds and work your way up to a few minutes.

In sleep

Don't sleep on your stomach. It can make your thoracic spine become more flat. You can try this simple sleep position to have better sleep.



1: For scoliosis curves in the upper back, sleeping on your back with a thin pillow under the shoulder blades.

2: If you prefer sleeping on your side, a pillow tucked between your legs helps open up the spinal canal. You can also place one under your upper ribcage to support your spine.

4: When scoliosis affects the lower spine, you may need to experiment with different sleeping positions. Stick a pillow either directly underneath or right above your lower back for extra support.

5: It might also help to add a small pillow beneath your neck (in addition to your regular pillow).

At work

Try not to sit for too long at any one time. It is best to move every 30 minutes. You can try these exercises to keep your body active.



1: Sit comfortably in your chair with your knees bent to 90 degrees and your feet firmly on the floor. Place one hand behind your lower back to ensure a correct lumbar lordosis.

3: With your head, look over to the right side and diagonally downwards towards your armpit. Place your right hand onto the occiput (the bony part of the base of your skull).

5: Use the weight of your arm to stretch the neck in a downward and diagonal direction. Hold it for 30 seconds, then repeat 3 times then swap.

8: Complete this stretch again after 30 minutes of sitting.

Breathing and relaxing

The slow, rhythmic repetition of breathing and blowing helps you relax.



1: Pretend that your lung is a big balloon, and you are slowly letting all the air out of the balloon.

2: Pretend that there is a birthday cake in front of you with lots and lots of candles; your job is to blow out all the candles very slowly.

3: Get and use a bubble wand. Slowly blowing it will create a stream of bubbles and help you increase your lung capacity.

4: Hold a tissue in front of you, about 10 to 12 inches away. Then see how long you can keep the tissue blowing in the air as they slowly blow out.



For people in Blue

You and your body is doing great. In the meantime, it would be better if you can understand more about spinal health and build a positive environment to help friends and other people who are coping with spinal conditions.

Tip 1:

If someone close to you is in Red and Purple, you can take your friend to a park and do the exercises together according to their treatment regimen.

Tip 2:

You can give your friends a hand for carrying their heavy stuff, together you are stronger, especially if your friends are in Red or Purple.

Tip 3:

If you know a friend who is being treated with a bracing, draw stickers together to keep your friend's bracing looking cool.

Tip 4:

You can mark the day "26th of June, The International Scoliosis Awareness Day" on your calendar to get in touch with your friends who are coping with Scoliosis to show your support and to learn more about their condition.

Remember, every good thing starts with positivity.



For people in Yellow

Your body is exploring. We advise you to get a health check from your doctor to understand better what your body needs. It's unlikely that there's anything seriously wrong but by observing your body closely, you can get better advice to stop any spinal condition before it starts to develop.

Tip 1:

Please communicate with your parents, school nurse, or your trusted adult about your thoughts and how your body feels, so they will support you better.

Tip 2:

Getting a health check or treatment is not frightening. Spotting your conditions on time can help you to build positive behaviours for your health. Besides, doctors suggest that any postural and spinal conditions can be treated, and current methods such as bracing are the most effective way to stop curve progression. (Please go to page X in section 1). There are different types of bracings that each suit specific conditions. Wearing a bracing that lasts till your growth may look hard, but it will bring many benefits for you in the future.

Tip 3:

You can share this booklet with your close friends so they can also understand the importance of getting a health check. You can always support each other towards building healthy habits and speaking openly about Scoliosis in the future.

Remember, every good thing starts with positivity.



For people in Red

Your body is changing. You may be planning or already experienced a bracing for your Scoliosis treatment.

We know the bracing journey, and managing Scoliosis is hard, so we highly advise you about the tips we shared early for yoga poses & breathing exercises to relieve the pain. Regular exercise is important for people with Scoliosis. It can help improve muscle strength and may help to reduce any back pain. We also shared some activities you can do or need to avoid based on your treatment.

At the end of this booklet, we have provided the support lines in which you can get help. Be open to talking about how you feel with your parents, friends, or a trusted adult, so they will support you better.

Important Note:

Embrace your Scoliosis and be open about how you feel, especially with your family and the people at your school. In this way, people can help you with your needs and support you through your treatment.

Sports you can do:

In these groups, sports and exercises that require using both sides of the body.

- Swimming
- Light Running & Walking
- Rowing
- Stretching
- Reformer Pilates, including clear back exercises

Sports you cannot do:

You need to avoid such activities that can harm your skeletal system while performing.

- Weight lifting
- One-sided sports, e.g., tennis or golf
- Impact sports, e.g., football, basketball
- Some poses in yoga or gymnastic that can repeatedly extend your torso.
- Brace the body from impact created while jumping, running, or dancing in any activity.



For people in Purple

Your body is special. You may be already experienced a bracing or planning a surgery option for your Scoliosis treatment.

We know that coping with Scoliosis is hard, so we want to ensure that you first get the opinion of your doctor before establishing an exercise regimen even that involves simple exercises. The tips we shared early, for yoga poses & breathing exercises to relief the pain, can be practiced under the control of your physical trainer since regular exercise is important for people with Scoliosis to improve muscle strength and may help to reduce any back pain

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Tip 2:

Brace the body from impact created while jumping, running, or dancing.

Tip 3:

During your PE classes, you can ask your trainer to talk more about Scoliosis openly so your peers can join you with some of the activities during the classroom.




Getting Help

At some point in your life, you may want to learn about your health or be in a safe environment where you can talk about your feelings more freely. Whatever the reason is, you can get help with Scoliosis and related conditions.

Here we provide some names and links of some organizations you can get help from.

Apart from these, you can participate in activities or campaigns on The International Scoliosis Awareness Day, 26th of June to celebrate what you have as a condition or to people you know who are in this situation with an understanding of this is something unique part of you that makes you more human and strong.



Sometimes the things that make you different make you the best.” -Martha Hunt

CurvyGirlsScoliosis

<https://www.curvygirlsscoliosis.com/>

Curvy Girls founded by Leah, who was also a Scoliosis patient and looking for others to talk who were also going through the same thing. With an international platform, many others can join the mentoring groups to educate themselves around Scoliosis and share tips to support each other.

ScoliosisAssociation UK

<https://www.sauk.org.uk/about-us/who-we-are>

SAUK is the largest patient-support association in the UK. They do provide support in many awareness fields starting from the campaigns and educating many others about Scoliosis. They also provide support groups to Scoliosis patients and families through up-to-date information and patient meetings.

NHS UK

<https://www.nhs.uk/conditions/scoliosis/>

Your GP or your hospital doctor is an essential source of information that can help you with your needs. It is important for you to take notes of your concerns or questions to them so they can help you more with your needs.

This is the end of the booklet.
Please follow us on our website and leave your feedback,
using the QR code below. Thank you so much for your time.



