

A Strong Back

How to strengthen your back and what to do for pain



Quality for life



Back pain

80% of people are affected at least once during their lives

Your back will soon let you know that you've been overdoing things and strained it: with localised pain, spasms or tight muscles. There can be many triggers for this kind of pain. You may have moved abruptly or remained in one position too long. But it's also possible that you have a specific ailment.

Back pain is one of the most frequent diagnoses made. Some 80% of people suffer from back pain at least once in their lifetime, usually affecting the lower back. And 20% of those have chronic back pain, with pain lasting more than three months.*

We want to help you strengthen your back and fight the causes of back pain. Sometimes it's enough just to be more aware of certain movements and exercise your back.

Medical devices such as supports and orthoses also relieve and stabilise your back. The following pages have information about back pain. It is also important that you consult your doctor or orthopaedic technician. Who can individually advise you .

*Source: Robert Koch Institute 2012, Germany Gesundheitsberichterstattung des Bundes (Federal Health Report), no. 53, p. 13.

"Wearing the orthosis, I have more control over my movement at work. This helps prevent strain."

Susanne, 32, florist
Wears the Lumbo Direxa orthosis

Understanding the causes

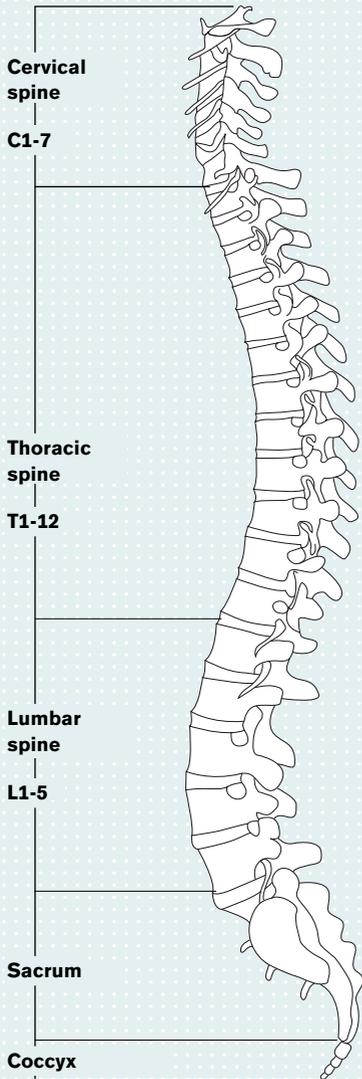
Specific and non-specific back pain

The spine supports the head and trunk and is an elementary part of our body. It ensures mobility of the spine and an upright gait and protects the spinal cord in the spinal canal.

Most people suffer from **non-specific back pain**. The most common causes are muscle strain, for example from lifting and carrying heavy objects or due to too little exercise. After many years, this muscle strain can lead to muscle tension, irritation and wear on the spine.

The following occurs in the back: Muscles that are not used enough become shorter and muscles that are strained tense up or are stretched excessively. Muscular imbalance ensues, which has an impact on ligaments, nerves and joints, thus frequently triggering pain. If people then adopt poor posture to relieve the pain, they exacerbate the muscular imbalance even more.

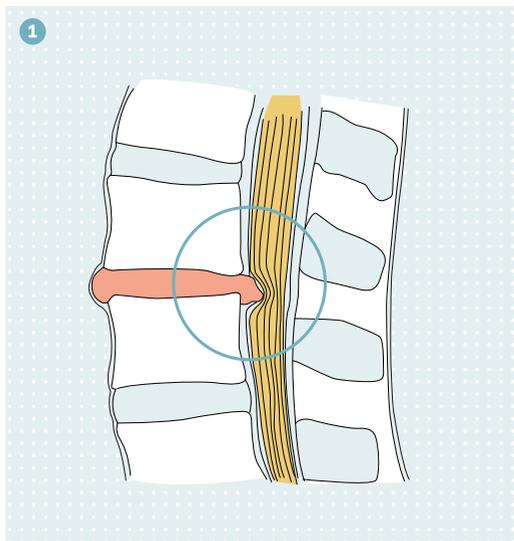
People with **specific back pain** have a pre-existing spine ailment. These conditions include osteoporosis, fractures or congenital deformities. Specific back pain generally increases with age.



The spinal column

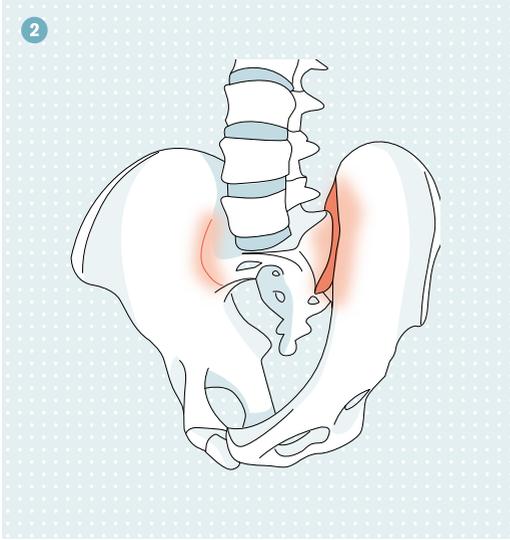
The spinal column consists of 24 vertebrae. There are 7 cervical vertebrae, 12 thoracic vertebrae and 5 lumbar vertebrae. Below them are 5 sacral vertebrae and 5 coccygeal vertebrae. The vertebrae are held together by ligaments; muscles and tendons support them. The greatest strains in the spine occur in the lumbar region. This is why there is often pain in this area.

Frequent causes of back pain are a prolapsed disk, irritation of the sacroiliac joint and sciatica.



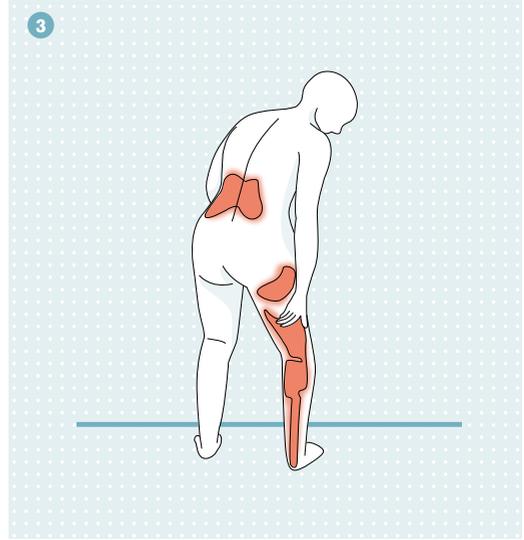
1 Intervertebral disk prolapse

The spine has 23 disks. They are located between the vertebral bodies. A disk consists of a fibrous ring that encloses a gel-like core. This core equalises pressure in the spinal column. Over the course of the day, its water content is reduced and over night, the disk absorbs water again like a sponge. This capacity is reduced with increasing age. If the fibrous ring is torn, the gel core can leak out and lead to a prolapsed disk. There is a risk that the nerves will be pinched, causing pain and signs of paralysis.



2 Sacroiliac pain

The sacroiliac joint is located at the lower end of the spine and connects the sacral bone with the ilium. Pain is often caused by blocked joints, for example due to strain, but from diseases such as osteoarthritis as well. The pain is usually on one side and radiates into the buttocks and thigh.



3 Sciatica

Sciatica is a burning and piercing pain that radiates into the entire leg. It is frequently caused by an intervertebral disk prolapse.

A Strong Back

What you can do

Just small changes in your daily routine can relieve and strengthen your back. You will find some tips on the following pages. Consult your physician beforehand. You should also contact your doctor if the pain persists.

Running: correct shoes for your back

When walking and running, wear shoes with soft soles and low heels. This will relieve your lumbar spine and joints.

Sitting, lifting, carrying: Be aware of your movements

Try to **sit** upright and not slouch (Fig. 1, 2). Even better: Change your sitting position often; this relieves your disks. For example, stand up when you're on the phone.

When you **lift** something, bend your knees and squat down. Spread your feet as wide as your hips and keep your back straight.

Lift the object close to your body and stand up with your back straight (Fig. 3, 4). A bent back will put great strain on your disks.

When **carrying** things, it's important to distribute the weight evenly. For example, take two smaller shopping bags instead of one big one.

Exercises at home: Strengthen muscles, eliminate poor posture

Specific exercises strengthen the back and make you aware of poor posture. We have compiled a few exercises that you can easily do at home (pages 16-19).

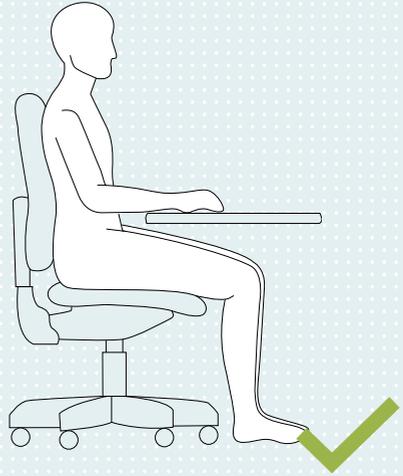
Sport: Gently strengthen your back

Sport promotes health and can alleviate back pain. Sports such as cycling, hiking and swimming are especially good, as they do not strain your back.

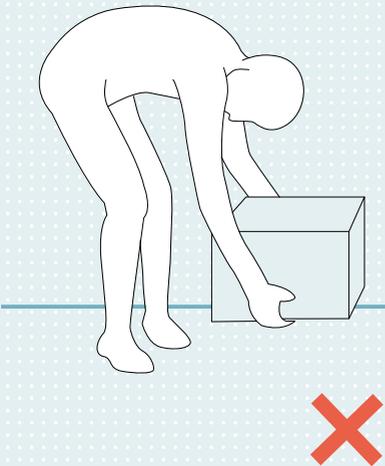
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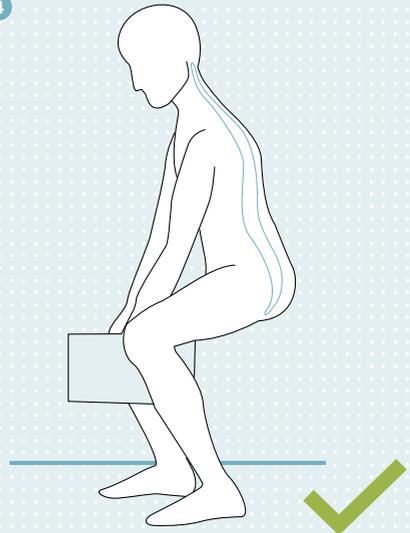
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3



4



Supports and orthoses

Support for the back

You can support and ease your back with supports and orthoses. Consult your orthopaedic technician or doctor to see which orthosis is right for you.

Legend

TS= thoracic spine

LS= lumbar spine

SIJ= sacroiliac joint

L= lumbar vertebra

S= sacral vertebra



Lumbo Sensa/Women

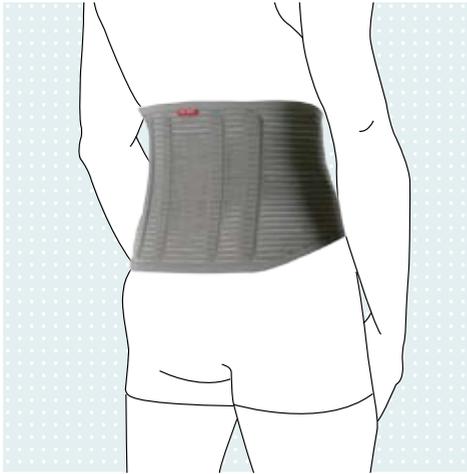
Art. no. 50R10/11

Indications

- Lower back pain
- Sciatica
- Muscular imbalances of the lumbar spine
- Degenerative changes of the lumbar spine
- Spondylarthrosis of the lumbar spine
- Facet joint syndrome of the lumbar spine
- Osteochondrosis of the lumbar spine

Promotes muscle activity

1. Optimal fit and excellent wearer comfort thanks to a three-dimensional flat knit material
2. Antibacterial, odour-inhibiting and particularly skin-friendly with SKINGUARD Technology
3. Breathable massaging pad stimulates blood flow



Lumbo Carezza

Art. no. 50R40

Indications

- Lower back pain
- Sciatica
- Ligamentosis in the lumbar spine area
- Muscular imbalances of the lumbar spine
- Degenerative changes of the lumbar spine
- Spondylarthrosis of the lumbar spine
- Facet joint syndrome of the lumbar spine
- Osteochondrosis of the lumbar spine
- Irritation of the sacroiliac joint

Supports the lumbar spine

1. Higher cut at the back for targeted support of the lumbar spine
2. Four auto-adaptive plastic rods for an optimal fit and low level of stabilisation
3. Practical closure with hand loops for easy application and removal



Lumbo Direxa/Women

Art. no. 50R50/51

Indications

- Low back pain
- Sciatica
- Muscular imbalances of the lumbar spine
- Degenerative changes of the lumbar spine
- Osteochondrosis of the lumbar spine
- Facet joint syndrome of the lumbar spine
- Intervertebral disc protrusion L4 through S1
- Intervertebral disc prolapse L4 through S1
- Discectomy L4 through S1
- Irritation of the sacroiliac joint

Stabilises the lumbar spine

1. Four auto-adaptive plastic stabilisation rods for an optimal fit
2. Two individually adjustable elastic straps for high spinal stability
3. No pressure, constriction or slipping due to optimal fit



Lumbo Direxa Stable

Art. no. 50R54

Indikationen

- Low back pain
- Sciatica
- Ligamentosis of the lumbar spine
- Muscular imbalances of the lumbar spine
- Degenerative changes of the lumbar spine
- Osteochondrosis of the lumbar spine
- Facet joint syndrome of the lumbar spine
- Intervertebral disc protrusion L3 through S1
- Intervertebral disc prolapse L3 through S1
- Discectomy L3 through S1
- Spondylolysis L3 through S1
- Traumatic or osteoporosis fractures L3 through S1
- Osteoporosis L3 through S1
- Irritation of the sacroiliac joint
- Slight to moderate spondylolisthesis L3 through L5

Stabilises the lumbar and lower thoracic spine

1. Higher cut at the back to support the lumbar and lower thoracic spine
2. Four adjustable metal rods and two coil springs for an optimal fit
3. Elastic straps for adjustable compression and high spinal stability



Dorso Carezza Posture

Art. no. 50R49

Indications

- Abnormal posture in the torso
- Muscular imbalances of the thoracic spine
- Kyphosis (without fused vertebrae)
- Degenerative changes of the thoracic spine
- Scheuermann's disease
- Thoracic spine pain

Activates the trunk muscles

1. Skin-friendly, breathable material for good wearer comfort
2. Coil springs activate the trunk muscles
3. Individually adjustable elastic straps for easy application and removal



Lumbo TriStep

Art. no. 50R30

Indications

- Stable vertebral body fractures of the lumbar spine without neurological deficits
- Spondylosis of the lumbar spine
- Intervertebral disk surgery of the lumbar spine
- Facet joint syndrome of the lumbar spine
- Lumbar spinal canal stenosis
- Symptomatic stenosis of the lumbar intervertebral foramina
- Instability of the lumbar spine
- Spondylolysis of the lumbar spine
- Spondylolisthesis of the lumbar spine
- Intervertebral disk prolapse of the lumbar spine

Stabilises and mobilises the lumbar spine in 3 stages of treatment

1. Removable stabilisation elements for the specific stage of treatment
2. High stability thanks to support elements
3. Optimal, anatomical fit thanks to lateral hook and loop fasteners



Enjoying life again with a stronger back Susanne wears the Lumbo Direxa

Since childhood, Susanne has had lower back pain. It is caused by a hip deformity. At first, she was only slightly impaired, but when Susanne began training as a florist at the age of 14 and had to stand for hours, she was in pain every day. “But I was young and got used to it,” says the 32 year old. But later on, when working in a flower shop and garden centre, she had to twist and turn, carry sacks of potting soil for customers, lifting up and down equipment. Her pain increased.

Susanne then had her two sons, aged six and nine, and last year her daughter. “Then I experienced the same problems with the children that I had at work,” she says, winking and laughing. “Lifting, carrying, setting down.”

Her everyday life changed when Susanne started wearing the Lumbo Direxa. The orthosis stabilises and supports her back. “It reminds me how I should move. I automatically straighten up,” says Susanne.



“Thanks to the orthosis
I can be there for everything
my children want to do.”

Susanne

At work, she now moves in a controlled manner, can do more on her own and does not need to ask her co-workers for help.

At home, she enjoys taking part in her children's activities, not just watching. “I am faster and fitter, and if you asked my children, they would probably say ‘Mama is fixed.’” The family even go on cycle rides together, which is good exercise for Susanne's back muscles.

Susanne puts the orthosis on above her hips and pulls it tight with the hand loops. She says the orthosis is light and adapts to her figure.

“The Lumbo Direxa fits well and does not slip,” says Susanne. And the slim design is hardly noticeable under clothing.

Her daughter is just learning to walk and both of them are enjoying this time. Wearing the orthosis, makes it easy for Susanne to bend down and hold the one-year-old's hand. Before the two set out, she can easily kneel down and tie her daughter's shoes. Susanne is simply enjoying life again – every day.

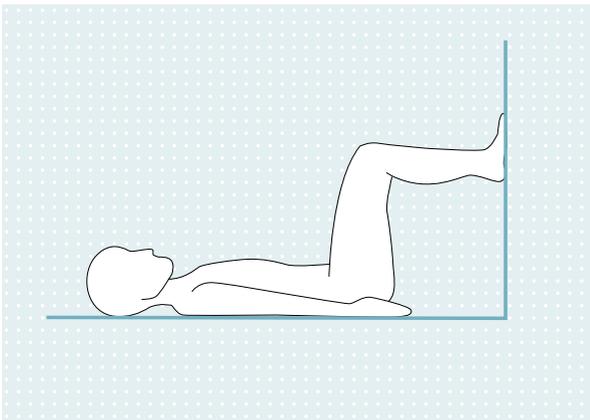
Back exercises

Exercises at home

Your doctor knows how to respond to your individual pain. After consulting with your doctor, you can do the following exercises at home to strengthen your back.

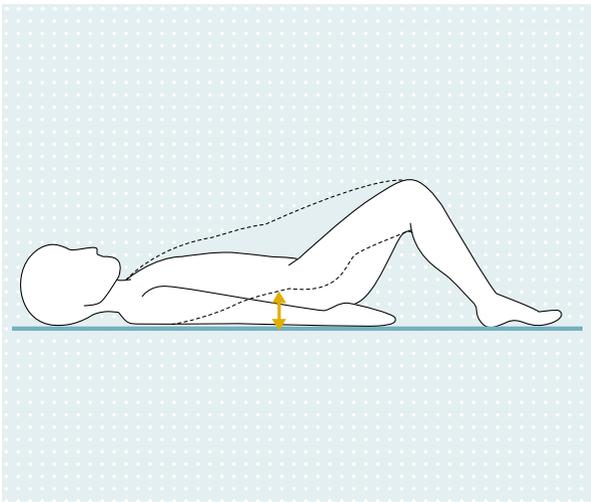
Please ensure that you breathe evenly during every exercise. Do not hold your breath and stop any movement if it hurts.

Some exercises also strengthen your stomach muscles because a strong back also requires strong stomach muscles. Otherwise, imbalance develops. If you exercise only your back, the stomach muscles are weakened and vice versa. Just 5-10 minutes of exercise every day can have a positive effect. We wish you success and hope you notice quickly that your back becomes stronger.



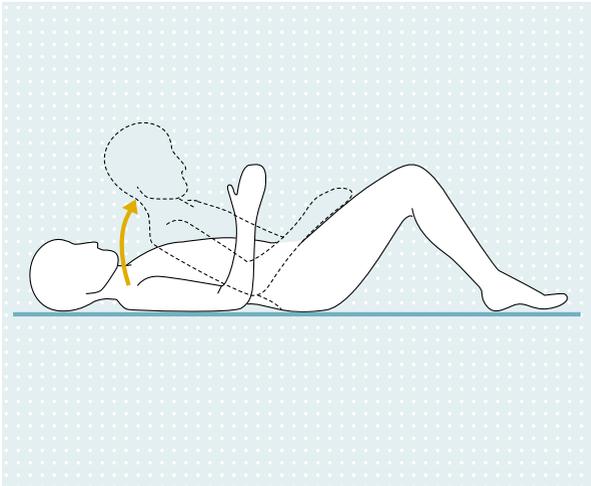
Exercise 1: Relax your back and consciously feel it

Lay down on your back with your feet up against a wall, so your thighs and lower legs form a 90° angle. Press your feet slightly against the wall. Slowly build up tension by simultaneously pressing your spine to the floor. Maintain this tension for 10 seconds. Then release the tension. Repeat the exercise 3 times.



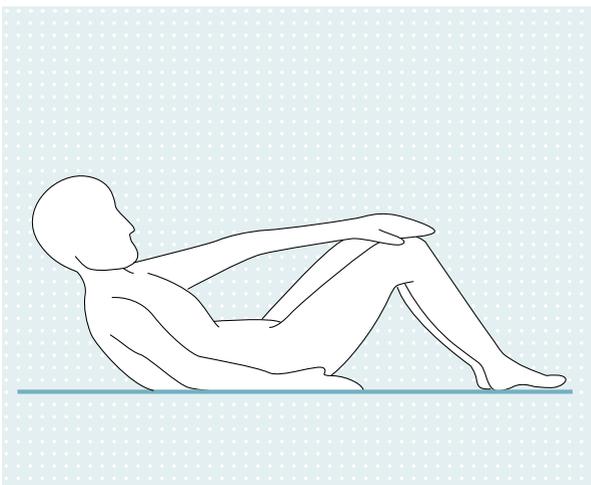
Exercise 2: Strengthen your muscles

Lie on your back and put your feet flat on the floor at shoulder width. Bend your knees slightly. Now lift your hips slowly so your back is raised from the floor. Tighten your abdominal and gluteal muscles so that your back is straight. Hold this position for 15 seconds. Repeat the exercise 3 times.



Exercise 3: Strengthen your abdominal muscles

For this exercise, you also lie on your back. Raise your knees and place both feet flat on the floor. Raise your head and shoulders slightly. Now press your hands against your thighs and maintain tension for 15 seconds. Try to press your navel to the floor. Repeat the exercise 3 times.

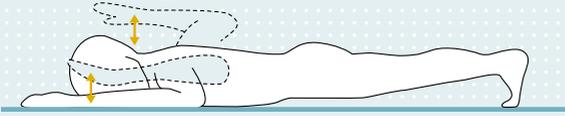


Exercise 4: Build up your oblique abdominal muscles

Lie on your back, raise your knees and put your feet flat on the floor. Lift your head and shoulders. Touch your right knee with your left hand. Hold this position for 10 seconds. Relax and now touch your left knee with your right hand and hold this position for 10 seconds. Repeat the exercise 3 times.

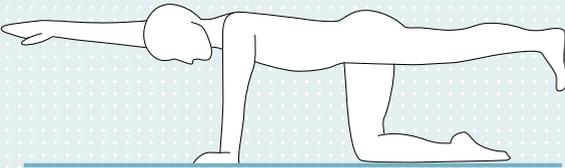
Exercise 5: Strengthen your back muscles, stretch your chest muscles

Lie on your stomach with your arms forming a U next to your head. Hold your head as an extension of the spine. Lift your arms, head and chest and pull your shoulder blades towards your spine. Tighten your gluteal muscles. Hold this position for 15 seconds and repeat the exercise 3 times.



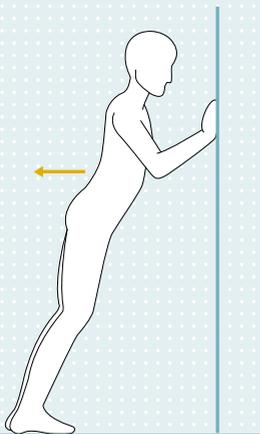
Exercise 6: Strengthen your back and gluteal muscles

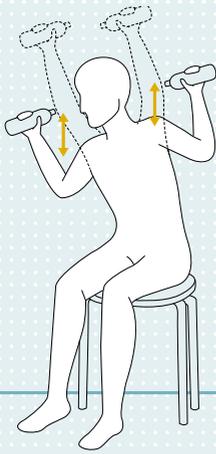
Get down on all fours on your hands and knees. Extend your left leg to the rear. Flex your toes while doing this. Now extend your right arm forward. Hold your arm, head and leg horizontal. Keep your back straight. Hold this position for 10 seconds and then switch sides. Extend your right leg behind you and lift your left arm. Repeat the exercise 3 times.



Exercise 7: Strengthen your abdominal and shoulder muscles

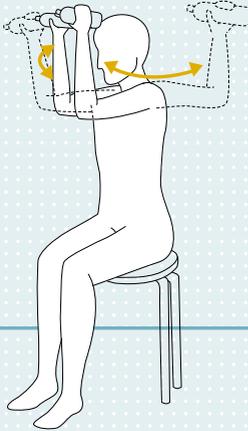
Stand upright about half a metre from the wall. Place your hands on the wall at shoulder height so you're standing with your back straight and leaning diagonally against the wall. Extend and flex your arms as in a pushup. Do this exercise 10 to 15 times. Repeat the exercise 3 times after short breaks of a few seconds.





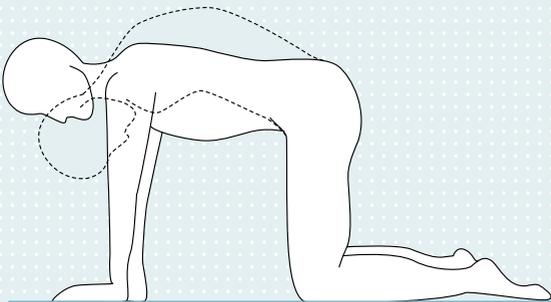
Exercise 8: Strengthen your back muscles

You will need two bottles for this exercise. You can use 0.5 or 1 litre bottles. Sit on a chair. Hold the bottles and extend your arms up to your ears. Lean your upper body forward. Raise and lower both arms alternately in short, rapid movements. Keep your back straight. Do this exercise 3 times for 30 seconds each time.



Exercise 9: Build up your shoulder and chest muscles

You will need two bottles for this exercise. You can use 0.5 or 1 litre bottles. Sit on a chair. Raise your arms holding the bottles in a U next to your ears. Now move your arms in front of your face at the same height. Repeat the exercise 10 times.



Exercise 10: Mobilise your spine, stretch your back muscles

Get down on all fours. Put your head on your chest and arch your back like a cat. Hold this position 5 to 10 seconds. Raise your head and hold it as an extension of the spine. Press your spine down to make a swayback. Hold this position for 5 to 10 seconds. Do this exercise 3 times.

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