

YOUR HANDBOOK FOR YOUR SPINAL HEALTH

SPINAL HEALTH

GUIDE BOOK



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Spine: Why is it important?

The spine is closely intertwined with our quality of life. Experts emphasize that to maintain a strong, pain-free back, neck, and waist over the years, it is crucial to have a deep understanding of the spine. Let's dive into the role the spine plays in our bodies and its profound impact.

The Central Pillar of our Body

The spine serves as the central structure of the body, comprising bones, discs, muscles, and ligaments, thereby maintaining the torso's shape and providing substantial support. Moreover, the spine functions as a joint.

This intricate spinal framework consists of multiple individual bones that interlock, permitting the neck and torso to execute complex movements, including bending, tilting, and rotating.

Crucially, the discs within the spine play a pivotal role in shock absorption. They function as cushioning materials situated between the bones and are instrumental in mitigating both significant, momentary shocks and the continual, minor shocks that occur during bodily movement. Muscles undergo cycles of contraction and relaxation in harmony with bone movements, while muscles and ligaments work in concert to securely bind the bones together.

The Crucial Nerve Pathway Linking the Brain and Organs

Another significant reason for the spine's importance lies in its role as a neural pathway that connects the brain to the body's organs. Within the spine is the spinal cord (known as the central nerve), and the spinal nerves (individual nerves that extend from the spinal cord) play a pivotal role. They facilitate the transmission of sensory information, including pain, temperature, and touch, to the brain, while also regulating the essential functions of major organs. The majority of sensations experienced by our body are relayed to the brain via the spinal nerves and spinal cord. It is also within the spinal cord that commands from the brain are dispatched to each organ. Any abnormalities within the spine that disrupt the smooth transmission of neurotransmitters from the spinal cord can result in improper organ function, potentially leading to diseases or disruptions in bodily functions, such as paralysis.

Furthermore, the spinal cord directly issues commands to the organs. Among these commands are reflex actions that bypass the brain's judgment, with a classic example being the knee-jerk reflex. For instance, if you were to tap your knee with your fist, you would observe an automatic, involuntary upward movement of your knee, independent of your conscious will. This knee-jerk reflex occurs by processing signals directly through the spinal cord, without involving the brain's cognitive decision-making processes.

The Importance of Back Muscles Covering the Spine

It's not just the spine itself but also the back muscles that cover and support it that hold significant importance. These back muscles serve as the conduits through which motor, sensory, and autonomic nerves pass, playing a pivotal role in controlling and coordinating the body's physical organs.

The spinal nerves located in the back contribute to the movement of various internal organs. This is because the brain dispatches signals and commands to all organs, including the intestines, through the spinal nerves within the back region. In cases where the functionality of these spinal nerves declines or becomes disrupted, the body's movements may deviate from the intentions of the central brain. It is widely recognized that prolonged back strain can lead to issues throughout various parts of the body. Moreover, stress, often regarded as the root cause of numerous ailments, is also transmitted through the spinal nerves situated in the back.

The source of spinal diseases closely related to quality of life

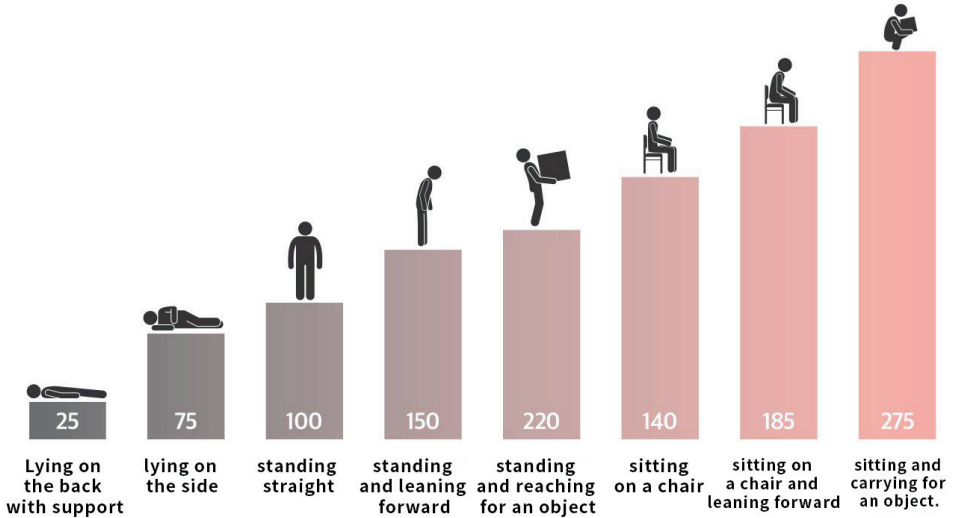
The human body's center of gravity resides within the spine, bearing a substantial load of 60 to 70 percent of the total body weight. This remarkable feature allows people to walk upright, effectively counteracting the force of gravity. However, this essential role also renders the spine susceptible to strain, making it inherently vulnerable to spinal diseases.

Spinal diseases, including lumbar disc and cervical disc disease, lumbar spinal stenosis, spondylolisthesis, and herniated discs, are common sources of concern for spinal health. Once a spinal disease takes hold, achieving complete recovery proves to be a challenging task, often leading to significant disruptions in daily life, including mobility difficulties. Unfortunately, spinal damage is difficult to reverse, much like the inability of bones to regain their maximum bone mass formed during growth as they age. While discs, ligaments, and joints can slow down degenerative changes, they remain incapable of full regeneration, regardless of diligent efforts.

Contrary to the belief that only significant accidents can lead to spinal diseases, even small, cumulative impacts can contribute to spinal damage. Lifestyle habits that pose a threat to spinal health increase the burden on the spine. Consequently, it is crucial to make dedicated efforts to rectify these habits and promote a healthier lifestyle.

The degree of pressure on the lower back varies according to posture.

Dr. Alf Nachemson, a medical doctor, says that the pressure on the lower back varies depending on the posture, whether lying down, sitting, or standing. The longer the rod, the higher the pressure on the lower back. The numbers represent the relative values when standing straight is set at 100.



Structure of the spine

The spine serves as the central support structure, connecting the head above and the pelvis below.

Comprising a total of 24 vertebrae, it includes 7 cervical, 12 thoracic, 5 lumbar, 1 sacral, and 1 coccyx vertebra. Except for cervical vertebrae 1 and 2, sacral vertebrae, and coccyx vertebrae, all vertebrae are composed of the vertebral body, pedicle, vertebral disc, and articular processes. Cervical vertebrae 1 and 2 are specially modified to provide support for the skull and allow for free movement of the neck.

Examining the spine's connection to various parts of the body, the cervical spine links to the brain, eyes, nose, mouth, teeth, neck, tonsils, shoulders, and thyroid gland. The thoracic spine is associated with the hands, heart, lungs, bronchi, gallbladder, liver, stomach, pancreas, spleen, kidneys, ureters, and small intestine. The lumbar spine has connections to the large intestine, abdomen, genitals, uterus, prostate, and feet. The coccyx links to the buttocks and ischium, and the coccyx is associated with the anus and rectum.

Around the spine, there are muscles that provide support, protection and enable movement. In addition to muscles, the spine is fortified by ligaments composed of elastic fibers, which serve the dual purpose of safeguarding the spine and maintaining balance. Furthermore, the spine is supplied with a network of blood vessels.

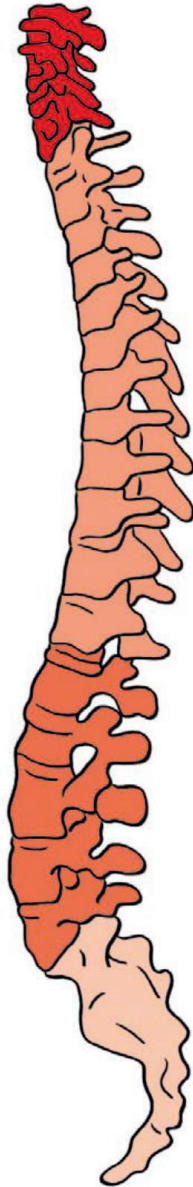
7 cervical
vertebrae








12 thoracic
vertebrae













5 lumbar
vertebrae






1 sacral
vertebra



1 coccygeal
vertebra



- C1  Brain, Head
- C2  Eyes, Ears
- C3  Teeth, Cheeks
- C4  Nose, Mouth
- C5  Vocal cords, Pharynx
- C6  Neck, Tonsils
- C7  Shoulders, Thyroid

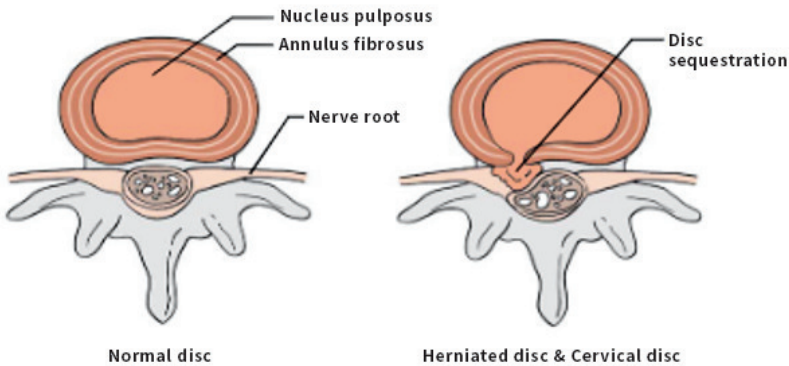
- T1  Hands, Esophagus
- T2  Heart, Coronary artery
- T3  Lungs, Bronchial tubes
- T4  Gall bladder
- T5  Liver, Blood circulation
- T6  Stomach
- T7  Pancreas
- T8  Spleen
- T9  Adrenal glands, Kidneys
- T10  Kidneys
- T11  Ureter, Adrenal glands
- T12  Small intestine,
Lymphatic Circulation

- L1  Large intestine
- L2  Abdomen, Appendix
- L3  Reproductive organs, Uterus
- L4  Prostate, Sciatic Nerve
- L5  Feet, Ankles

- Sacrum  Glutes, Pelvis
- Coccyx  Anus, Rectum

3 major spinal diseases

- **Herniated disc & Cervical disc**



A herniated disc, mainly accompanied by back pain and radiating pain

A herniated disc, also known as lumbar disc herniation, is a condition where symptoms arise due to the rupture of the disc fibers that absorb shock between vertebrae, leading to the protrusion of part of the nucleus pulposus. This protrusion puts pressure on the nerves, causing significant discomfort. While the exact cause can be degenerative or result from changes without a clear origin, it can also be triggered by heavy lifting or improper posture.

The primary symptoms associated with herniated disc include back pain and radiating pain, often accompanied by numbness in the legs. Medical diagnosis typically leads to conservative treatment methods, such as drug therapy, physical therapy, and muscle-strengthening exercises. If these conservative measures fail to show improvement, surgical interventions may be considered.

The Rise of Cervical Disc Disease with Increased Smartphone Usage

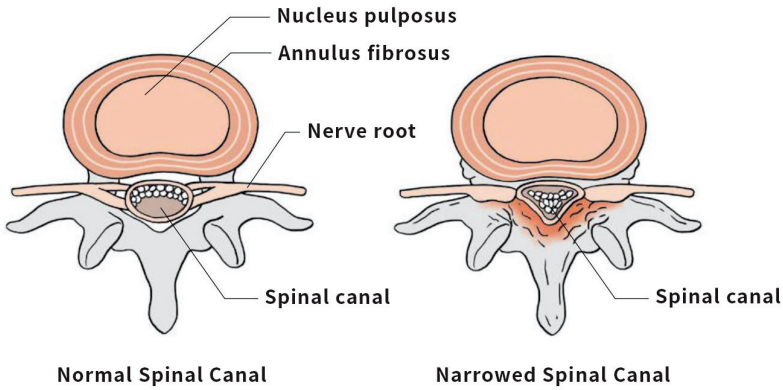
Cervical disc herniation is a condition in which the disc located between the bones of the cervical spine herniates or ruptures, exerting pressure on the nerves. This pressure leads to pain and neurological symptoms, manifesting in the neck, shoulders, back, and arms. Prominent symptoms include widespread pain in the shoulder, arm, and hand, as well as arm weakness, and, in severe cases, complete arm paralysis. Cervical disc herniation can stem from degenerative changes and is progressively on the rise as computer and smartphone usage becomes more prevalent.

When diagnosed with cervical disc herniation at a medical facility, conservative treatments like medication or muscle-strengthening exercises are usually recommended, particularly if the condition is not severe. If these measures fail to yield improvement, surgical intervention may be considered as a potential option.

Improving lifestyle habits is important

Prevention of lumbar disc and cervical disc in daily life is more important than anything else. To avert lumbar disc herniation, maintaining a regular back exercise routine is crucial. Activities like walking on level terrain, cycling, and swimming are highly recommended. For cervical disc herniation prevention, improving lifestyle habits takes center stage. It is imperative to refrain from prolonged periods of head tilting or lowering and consistently maintain proper sitting posture. Furthermore, integrating some neck-friendly stretching exercises into your routine whenever possible can be beneficial for overall neck health.

- Lumbar spinal stenosis



Lumbar Spinal Stenosis: Occurs due to narrowing of the spinal canal and intervertebral foramen

Lumbar spinal stenosis is a condition characterized by the coexistence of back pain and neurological symptoms stemming from the constriction of the spinal canal and intervertebral foramen. Most instances of this ailment occur in individuals in their 50s and 60s. If you are affected by lumbar spinal stenosis, you are likely to experience recurring back pain. This condition is distinguishable from pain associated with lumbar disc issues, often presenting as discomfort in the hips or buttocks, which can lead to leg disability and reduced mobility.

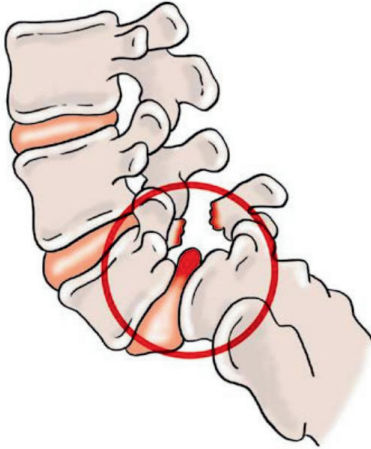
If symptoms are not severe, conservative treatment is performed.

In the case of a diagnosis of lumbar spinal stenosis at a hospital, conservative treatment is typically the course of action if the symptoms are not severe. This conservative approach may encompass drug therapy, physical therapy, and exercise therapy. However, if there is no discernible improvement following conservative treatment or if symptoms like muscle weakness or spinal cord damage manifest, medical practitioners may contemplate additional procedures or surgical interventions as a potential next step.

Pay attention to your daily behavior and posture

lumbar spinal stenosis, it is important to refrain from activities that place strain on the spine. When lifting heavy objects, it's crucial to avoid putting excessive pressure on your spine and refrain from overexerting your lower back. Practicing proper spinal posture, whether when sitting or standing, can be beneficial. Excessive weight gain can place added strain on the spine and weaken the muscles supporting it, making it advisable to maintain an appropriate weight to alleviate this burden.

- **Spondylolisthesis**



Occurs most often in the lower lumbar spine

Spondylolisthesis is a condition in which the upper vertebrae shift forward relative to the lower vertebrae. This ailment results in back pain and numbness in the legs and is sometimes referred to as 'spinal slippage' or 'spinal dislocation.'

Spondylolisthesis can occur when the joint processes are congenitally compromised or when the connection between the upper and lower spine is elongated due to trauma or spinal degeneration. While it can manifest in any section of the spine, it is particularly common in the lower lumbar region.

Back pain and numbness and pain in the legs

The primary symptom associated with spondylolisthesis is back pain. If you have spondylolisthesis, you may experience back pain when transitioning from a seated position to standing or when leaning backward. Additionally, morning discomfort upon getting out of bed, extended periods of standing, or prolonged walking can also trigger back pain. In addition to back pain, individuals with spondylolisthesis may encounter buttock pain and experience numbness and pain in the legs.

The severity of the condition typically correlates with the intensity of back pain. In more severe cases, sensory or motor nerve damage may lead to symptoms such as muscle weakness.

If you have a herniated disc also, consider surgery.

If you suspect spondylolisthesis and go to the hospital, you will be asked how much your vertebrae have slipped. If the test results show that the condition is in the early stages, it is common to observe the progress while administering conservative treatment such as medication or exercise therapy. If the pain is severe due to other spinal diseases, surgery may be considered. When you have spondylolisthesis, it is important to maintain good lifestyle habits and exercise to strengthen the muscles around the spine.

Benefits of Spinal Health

A healthy spine offers numerous advantages beyond the prevention of back and neck pain. With a healthy spine, you can reduce the risk of spinal diseases, enhance blood circulation, bolster your immune system, and experience stress relief through proper and healthy breathing.

1) Prevention of spinal diseases

The primary advantage of spinal health is its role in preventing spinal diseases. Generally, spinal conditions like intervertebral disc herniation and lumbar spinal stenosis predominantly result from the degeneration and gradual wear and tear associated with aging. Consequently, even after undergoing treatments such as surgery, the risk of recurrence remains if lifestyle improvements are not implemented, rendering the issue fundamentally unresolved.

Many individuals tend to spend a substantial portion of their lives in seated positions due to work or study requirements. A significant problem arising from prolonged sitting is the heightened strain it places on the spine compared to other postures. Studies have indicated that the seated position endures six times the load of the lying position and 1.5 times that of the standing position. Furthermore, if a seated position is maintained for an extended duration or if a hunched posture is assumed, the strain on the spine intensifies.

Experts unanimously stress the importance of correcting poor posture and lifestyle habits to promote spinal health. This entails minimizing the burden on the spine as much as possible and keeping the spine in good condition through appropriate stretching and exercise. However, when engaging in stretching or exercise routines, it is crucial to take care not to strain the spine or its discs. For individuals experiencing spinal pain or stiffness, the application of heat and massage can offer beneficial relief.

2) Smooth blood circulation

Spinal health not only plays a crucial role in preventing spinal diseases but also has a significant impact on improving blood circulation. While we often associate blood circulation issues with vascular problems like cholesterol or blood clots, it is equally connected to the strength and health of spinal tendons. Blood circulation is the process by which oxygen and nutrients are supplied to our organs while waste products are removed. However, when nerves are compressed due to spinal abnormalities, such as herniated discs or lumbar spinal stenosis, the nerves responsible for regulating blood vessel function can be interrupted. This interference leads to a reduction in blood vessel function, resulting in compromised blood circulation. The delayed blood flow can cause cold or numb extremities, like hands and feet. This explains why patients with cervical disc herniation may experience cold hands, and those with lumbar disc herniation and lumbar spinal stenosis may experience cold feet.

Moreover, spinal health also has a positive impact on relieving chronic fatigue and enhancing concentration. If the spine is unable to properly support your body weight due to spinal abnormalities, it can lead to chronic fatigue. Additionally, when the spine places pressure on nerves, it may negatively affect your ability to focus and concentrate. Thus, maintaining spinal health is crucial for overall bodily function.

3) Maintain immunity

Spinal health significantly influences the maintenance of one's immunity. To understand the connection between spinal health and immunity, it's essential to consider immune cells. Our body's immune cells, primarily white blood cells, are produced in the bone marrow located around the spine. These immune cells are produced in the leg and arm bones until adolescence when the growth plates close. However, in adulthood, they are generated in the spine, ribs, hip bones, and the skull. This underscores the vital role of spinal health in supporting the immune system.

Furthermore, the spinal nerves, safeguarded within the spinal cord, are closely tied to immunity. These spinal nerves regulate the immune response by either activating or suppressing it depending on the situation, via the sympathetic and parasympathetic nervous systems. They also control the production of immune cells. If there's an issue with the spine, such as nerve compression, immune function may be compromised, potentially leading to various diseases.

Additionally, abnormalities in the spinal nerves can lead to various side effects like insomnia, stress, and depression. Thus, maintaining a healthy spine is essential for both maintaining body balance and a robust immune system. It's crucial to pay attention to spinal health for overall well-being.

4) Relieve stress through healthy breathing

Spinal health is linked to breathing and stress relief. At first glance, it may seem that spinal health, breathing, and stress have no connection, but it's important to recognize that people naturally try to alleviate stress by taking deep breaths and exhaling when they are under pressure. Deep breathing is the body's instinctive response to stress reduction, which is why experts recommend meditation and breathing techniques as effective stress relief methods.

Breathing plays a crucial role in stress relief, but if your spine is not in good health, it can impede your breathing. There are 12 ribs attached to the spine, and our breath is facilitated by the expansion and contraction of these ribs. However, if there is an abnormality, such as a spinal misalignment, it can restrict the movement of the ribs and hinder proper breathing.

Stress is often regarded as the root cause of various diseases. Numerous studies have confirmed that stress weakens the body's immune system and contributes to the development of diseases. If you want to effectively manage and reduce stress and lead a happy and healthy life, it's essential to prioritize your spinal health from this moment. A healthy spine is the foundation for healthy breathing, which is a direct route to stress relief.

Take a look
at my spine

Herniated disc & Cervical disc checklist

You can assess your spinal health with this checklist. If you experience regular pain in your lower back or neck, use self-diagnostic methods to determine whether your symptoms align with herniated or cervical disc problems.

- **Herniated disc self-diagnosis**

- It hurts when you walk on tiptoe or with your heels.
.....
- There is a change in gait, such as walking while waddling.
.....
- When you walk for a long time or go down stairs, you feel more pain in your back than usual.
.....
- You feel numbness and loss of strength in your legs, ankles, or toes.
.....
- In a lying position, if you straighten your knees and raise your legs, and you experience symptoms of pulling in your calf or toes, or if your legs do not rise at an angle of more than 45 degrees.
.....
- It is difficult to sit for a long time or lie down straight because of the pain.
.....
- The pain gets worse when you sneeze or move your back.
.....
- When the pain is severe, there are symptoms of urinary and bowel dysfunction.
.....

● **Cervical disc self-diagnosis**

- Fatigue comes on quickly and the fatigue remains even after sleeping.
.....
- The neck and shoulders are often tight, and it is difficult to lean back.
.....
- Along with pain in the neck and shoulders, dizziness and headaches occur.
.....
- Your arms and hands become numb.
.....
- You have difficulty holding or using something because your hands lack strength. This also applies to cases where it is difficult to fasten buttons or use chopsticks.
.....
- Computers or smartphones per day is very long, exceeding 4 hours.
.....
- When you raise your arm upward, your shoulder and neck pain is relieved.
.....
- Wake up often because your neck, shoulders, and arms hurt.
.....

What is your posture now?

Let's check for ourselves what our posture is like on a daily basis. Even people who think they have been living in an ideal posture may not think so. From now on, let's find out the ideal posture to maintain a strong spine for a long time.

1) When Standing



GOOD

Straighten your back so that your spine is in the middle of your body, place your head on the center line of your torso and pelvis when viewed from the front, and pull your chin naturally.



BAD

Bent posture when standing, you will not be able to straighten your back and neck, so be careful.



BAD

If you crane your neck forward when standing, it harms the health of your spine, including your neck and lower back. In particular, check carefully whether the neck is pulled forward in an inverted C shape.



BAD

As much as an inverted C-shaped neck
The bad thing is the straight neck.
When standing, the neck is tilted too far back, damaging the natural C-shaped curve of the neck. It puts a big strain on your neck.

2) When Sitting



GOOD

Keep your back straight and pull your chin naturally. Sit while maintaining the C-shaped curve of your neck.



BAD

If you lean forward when sitting at a desk, your neck muscles will become tense and fatigue will increase, causing pain. If this posture continues, the axis of the entire body, including the waist and pelvis, may collapse.



BAD

Sitting crookedly and crossing your legs causes pelvic asymmetry. If you find it more comfortable to sit with your legs crossed, your pelvis may already be out of alignment.



BAD

In a sitting position, such as leaning on a sofa, the pressure on the disc increases by more than three times compared to lying down. Sitting in this wrong posture for a long time can cause your bones to become misaligned.

Spine health check points

Does the chair you use have armrests on both sides?

Choose a chair with armrests whenever possible. When you stand up or sit down, if you move while supporting your body on the armrest, the force is distributed. The burden on the spine is reduced by about 10%.

3) When Walking



GOOD

Hold your head straight, pull your chin slightly toward your chest, then tuck your stomach in and strengthen your butt muscles as you walk.



BAD

Walking while looking at a cell phone threatens the health of your back and neck. If you lower your head too much or lean forward, it will put a strain on your back and neck.



BAD

Narrow, sharp heels will inevitably put a strain on your lower back and worsen your walking posture. If possible, wear sneakers or shoes with appropriate heels and good cushioning.



BAD

People who walk with their knees bent. This is not desirable. People who walk with their knees bent put a strain on their waist and back.

Spine health check points _____

Do the shoes fit my feet comfortably?

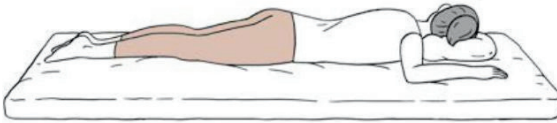
Choose comfortable footwear like sneakers or low-heeled shoes with a heel height of about 1 inch. Extremely low-flat shoes or slippers lack cushioning, and high heels can strain your lower back, so it's best to avoid them.

4) When Sleeping



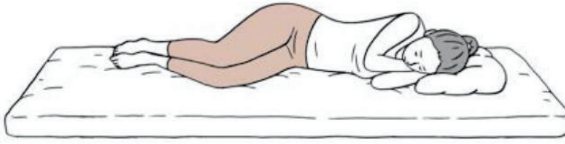
GOOD

When sleeping, either lie on your back or sleep on your back with your knees bent. When sleeping on your side, place a cushion between your legs.



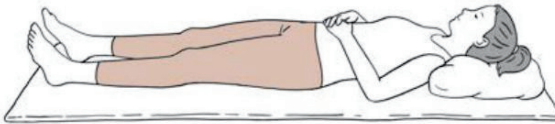
BAD

When sleeping on your stomach, your neck tends to turn sideways or bend. This strains your neck, flattens the curve of your lower back, and increases tension in the spine.



BAD

The posture of bending your back like a shrimp makes your back bend or twist your spine. Also, if you sleep on one side for an extended period, your shoulder may get compressed, leading to discomfort.



BAD

The habit of sleeping with a thin blanket on the floor instead of a bed is detrimental to your spinal health. Sleeping with a blanket on a hard floor flattens the curve of your spine, causing pain.

Spine health check points _____

Are you using a pillow that is too high?

Sleep on a pillow that is too high on your back can put a lot of strain on your neck. Providing sufficient support from under your shoulders with a wide, low pillow is advisable.

5) When looking ahead



GOOD

When looking straight ahead, place your head on the centerline of your torso and pelvis and gently pull your chin. Also, straighten your back so that your spine is in the middle of your body.



BAD

Pulling your head too far forward strains your discs. If this posture is repeated, it can lead to pain. To prevent your neck from tilting forward, shoulder and back muscles become excessively tense.



BAD

When looking ahead, some people unconsciously tilt their heads slightly to the side instead of looking straight ahead. This can cause an imbalance in the neck and the entire spine, including the back and lower back.



BAD

Slumping your shoulders when looking ahead is detrimental to the health of your neck, shoulders, and back. Make it a habit to keep your upper body upright, not just your neck, but also your shoulders and back.

People who need to be especially careful about their spine

People who maintain the same posture, such as sitting or standing, such as drivers or salespeople, must be especially careful about their spine. This puts a strain on the muscles and bones surrounding the spine, which can lead to not only back pain but also spinal diseases.

A person who sits for a long time

A person who sits for a long time, such as drivers, may face spinal problems. Drivers, especially bus or taxi drivers, often experience back strain because they remain in the same sitting position for extended periods. This also applies to office workers and students who spend prolonged hours sitting. When sitting for long periods, the weight of the upper body puts direct pressure on the spine, further increasing the load on the discs. It's essential to take precautions when driving for extended durations, such as during holidays or long trips.

A person who stands for long periods

People who stand for prolonged periods, like those working in department stores, supermarkets, fast-food restaurants, cafes, and similar roles, are also at risk of spinal issues. The continuous muscle tension and strain on the bones around the spine from prolonged standing can cause stiffness and discomfort. When the muscles surrounding the spine become rigid, it places stress on the nearby bones and nerve tissue, resulting in back pain. Even hairdressers, who stand all day attending to customers, should be mindful of their spinal health. Procedures like perms or hair dyeing, which take a long time to complete, can exert significant strain on the spine. Prolonged standing can lead to poor posture, such as standing cross-legged or hunching, which may disrupt body balance and distort the pelvis and spine.

A person who lifts a lot of heavy things

Individuals who frequently lift heavy objects, including courier delivery workers and agricultural laborers, should also take precautions to protect their spine. Moving heavy loads suddenly places a momentary force on the lower back, which can lead to acute back pain or spondylolysis. Spondylolysis is a condition where there are defects in the joint area, causing a separation of the bone joints. Delivery workers, in particular, need to be cautious as they spend long hours driving delivery trucks.

Practicing spinal health

Lifestyle habits that keep your waist young for a long time

To maintain a young and healthy back for a long time, you must pay attention to even small movements in daily life, such as lifting heavy objects, doing laundry, and washing your hair. Experts advise to be careful because if movements that harm the health of the back are accumulated over a long period, it can lead to spinal imbalance.



HABIT 01

When lifting heavy objects

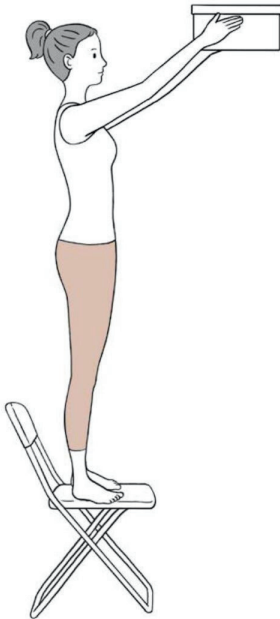
If you care about your back health, be careful when lifting heavy objects. Bending down to lift a heavy object puts a strain on your lower back. Sit with your legs and knees apart close to the object to be lifted, hold the object as close to your body as possible, and stand up using your knees.



HABIT 02

When washing dishes

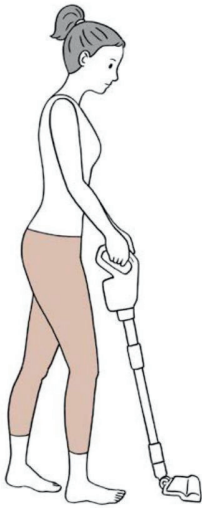
Be extra careful when washing dishes while doing household chores, as you will have to bend over for a long time. When washing dishes, place a 10 cm high box or book under one foot and raise it to relieve the burden on your back. If you don't have a box or book, it can be helpful to slightly lean belly button against sink.



HABIT 03

When taking out an object from a high place

Pay close attention when removing items from high places in the cabinet. If you tiptoe around to retrieve an item, you often end up hurting your back or missing the item. When removing an object from a high place, it is best to use a chair and climb up to maintain a stable posture.



HABIT 04

When pushing the vacuum cleaner

Even when doing housework, you should keep your back health in mind. When pushing a vacuum cleaner, most of the time you push with your arm strength, which causes you to keep bending over. When pushing the vacuum cleaner, hold the vacuum cleaner as close to your body as possible and push while walking forward.



HABIT 05

When washing your face

Most people wash their face with their head and back bent, which is not desirable. Instead, wash your face with both knees bent or one foot on a stand. Then the center of gravity concentrated on the spine is distributed to the legs and moved to the waist. The burden of travel is reduced.

HABIT 06

When washing your hair



When washing your hair, just like when washing your face, it's important to pay attention to your lower back. It's common for people to bend their heads and lower backs over sinks or bathtubs while washing their hair, which can strain the lower back. The best way is to stand in the shower with the showerhead at your back, leaning your head backward to wash your hair.



HABIT 07

When you sneeze

Watch your back even when sneezing. When you sneeze, you suddenly bend over and your lumbar disc may be damaged. To prevent this, it is best to sneeze while supporting your back with both hands and sticking out your stomach. Be careful not to move too much.

HABIT 08

During bowel movements



Even during bowel movements, one should be mindful not to strain the lower back. People who experience constipation or those who bring their mobile phones or tablets with them to the bathroom need to be especially cautious. Straining the back by exerting force or bending forward while looking at a mobile phone can be detrimental to spinal health.

Four things we recommend for your spinal health

In addition to lifestyle habits that will keep your back young and healthy for a long time, there are four things you must remember for your spinal health. We look at the effects of stretching, heat and massage, core exercises, and maintaining an appropriate weight on spinal health.

Stretching

The first thing recommended for spinal health is stretching. Even if you don't spend a lot of time or effort, just stretching from time to time can be very helpful for your spinal health. Stretching is especially necessary for people who sit and work. Standing up once in a while to relax your body by stretching is good for relieving the load on your spine and loosening stiff muscles.

Heat and Massage

Heat and massage improve blood circulation and relieve pain by loosening tense muscles. It is helpful for spinal health. Heat is effective in relieving pain caused by muscle pain and spinal diseases and improves blood circulation by dilating blood vessels. Massage relieves tension in the body and relaxes tense muscles around the spine. It also activates the parasympathetic nerves to relax the body. It is beneficial for relieving stress and maintaining immunity.

Core exercise

Core muscles are directly attached to the vertebrae. Doing core exercises strengthens the muscles around the spine to better support the spine and has the effect of slowing down degenerative changes in the spine. If a person with a back disease such as a herniated disc does core exercise, it will not recur. It helps prevent pain. However, doing excessive exercise when there is a spinal problem may worsen the condition, so be careful.

Maintain appropriate weight

In obese people, degenerative changes in the spine are accelerated. The spine supports a significant portion of the body's weight, and gaining weight can increase pressure on the discs. Obesity is associated with the knees. It is also bad for leg joints, so it is advisable to maintain an appropriate weight for your body. If you lack muscle mass, the strength to support your spine may become weaker, so increase muscle mass through appropriate exercise.

Foods that help support spinal health

Staying close to foods that help with spinal health is also a way to maintain spinal health. Since the main structure of the spine is bone, consuming foods that are good for bones will help the spine. It's beneficial to your health. Let's regularly consume foods rich in calcium.

Anchovy

When talking about foods related to spinal health, anchovies cannot be left out. Although anchovies are small in size, they are full of nutrients and are known to be effective in maintaining bone and spine health. 100g of anchovies contains about 500mg of calcium, which is 5 times more than milk. Cooking using anchovies is basic, and dried anchovies can be eaten as a snack.

Broccoli

Among vegetables, broccoli is good for bone health. Broccoli is rich in calcium as well as vitamin C, and K. Vitamin C increases calcium absorption, and vitamin K removes calcium from the body and prevents discharge. Broccoli also strengthens bones by promoting the production of osteocalcin, which plays an important role in the formation of bone structure.

Beneficial exercise vs harmful exercise for spinal health

Exercise is essential for maintaining spinal health. Not only to prevent spinal diseases but also after spinal-related treatment or surgery. Experts advise you to exercise little by little consistently to maintain spinal health.

Beneficial exercise

The best exercise for spinal health is walking. Walking helps maintain spinal balance, promotes overall body movement, and benefits blood circulation and cardiovascular function. It is recommended to briskly walk for 30 minutes to 1 hour each day, with a pace that causes a slight sweat. Walking on gently sloping terrain is suitable, and if your back and knees are healthy, hiking is also recommended. Swimming is known to be beneficial for spinal health, but it's important not to overexert the back and waist. Exercises that primarily involve stretching, such as yoga and Pilates, are also helpful for spinal health. However, it's essential to avoid extreme bending of the waist or neck during these exercises. If you experience discomfort or pain in your back after exercising, remember that you might be overexerting yourself.

Harmful exercise

Commonly, exercise is considered better than not exercising at all. However, it's crucial to be cautious, as there are exercises during which one needs to be mindful of spinal health. While individuals with a healthy spine may be fine, those with spinal issues like lumbar or cervical disc problems should avoid high-impact exercises such as jumping rope, soccer, basketball, and aerobics. Even if you don't have a diagnosed spinal condition but experience some discomfort in your spine, it's advisable not to engage in strenuous activities like jumping rope, soccer, basketball, or aerobics.

Furthermore, individuals with neck issues should exercise caution, especially during indoor cycling. Exercises that involve leaning the body forward while keeping the neck extended for an extended period can strain the neck muscles. Regular cycling with a standard posture is a safer alternative to protect spinal health compared to indoor cycling.

Spine
health
questions
Q&A

Q1 What are the symptoms that might suggest a spinal disorder?

A: Lumbar disc herniation often presents with symptoms like legs and buttocks being numb, as well as difficulty bending the lower back. One simple test is the straight leg raise test. In this test, if a patient lying down experiences lower back pain and numbness when raising their straightened leg, a lumbar disc herniation may be suspected.

Cervical disc herniation is associated with shoulder or scapular pain and numbness in the neck and down the arm. Weakened strength when lifting the arm or holding objects is also possible. An at-home test called the "Spurling test" can help. In the Spurling test, the patient tilts their head backward and turns it to the painful side, while the examiner applies downward pressure. If this exacerbates the numbness and pain, cervical disc herniation is likely. Lumbar spinal stenosis often causes frequent lower back pain, leg numbness while walking, and worsening pain when bending the lower back backward. These symptoms may suggest lumbar spinal stenosis.

Q2 What is the difference between lumbar disc herniation and lumbar spinal stenosis?

A: Both conditions are caused by abnormalities in the spine that lead to nerve compression. Lumbar disc herniation occurs when increased spinal load causes a disc to protrude and press on the nerves. Lumbar spinal stenosis, on the other hand, results from the narrowing of the spinal canal, which serves as the nerve pathway, due to various reasons. Because the symptoms of these two conditions overlap, it can be confusing to distinguish between them. Seeking the expertise of a medical professional for an accurate diagnosis is crucial.

Difference between herniated disc and lumbar spinal stenosis

Herniated disc	Lumbar spinal stenosis
Often progresses acutely	Progression tends to be relatively slow
Symptoms can worsen when sitting or lying down	Symptoms may improve when sitting or lying down
Pain is mainly in the front of the thigh and knee	Pain is mainly in the back of the thigh and knee
Numbness primarily affects one leg	Numbness typically affects both legs
Fewer associated conditions	More commonly associated conditions

Q3 What is the reason for consistently managing the spine?

A: The primary cause of spine diseases is degeneration, which, once it progresses, is difficult to regenerate or recover through secondary efforts. The methods available at this point involve muscle supplementation or slowing down the degenerative changes. Thus, it is crucial to manage spine health actively. An unhealthy spine can lead to discomfort in daily activities and restrict your body's movement. Various studies have shown that spine diseases rank 1st or 2nd in terms of diseases that deteriorate the quality of life. Additionally, the spinal cord nerves that the spine protects play a role in transmitting sensations to the brain and regulating organ functions. An unhealthy spine can lead to a decrease in organ function, as well as issues such as impaired blood circulation and sensory disturbances. Maintaining a healthy spine is essential for preserving overall health.

Q4 Is it true that spine management should start from a young age?

A: Yes, it is. It is advisable to start managing your spine as early as possible, even from childhood. Nowadays, the age at which spine diseases such as lumbar disc herniation and lumbar spinal stenosis occur has decreased. This is mainly due to an increase in sedentary activities and poor posture that continuously stresses the spine. If the natural S-shaped curve of the spine is distorted or if there is an imbalance between the left and right sides, it can lead to spinal deformities and, in severe cases, scoliosis. Adolescents, in particular, are more susceptible to developing scoliosis because their bone growth is still in progress. Carrying a backpack on one shoulder, crossing legs, leaning to one side while watching TV, and other habits can cause spinal imbalances that should be corrected. For students who spend a lot of time studying while sitting, it's essential to incorporate regular stretching into their routine. If you experience spine pain or notice an uneven pelvis or protruding spinal deformities during self-examination, it's highly recommended to seek an accurate diagnosis from a medical specialist.

Q5 What is the cost of treating spine disorders?

A: According to the National Institutes of Health, it said Patients treated non-surgically had an average treatment cost of US\$ 1,650.00, while patients treated surgically had an average cost of US\$ 18,520.00. It's challenging to determine the exact treatment cost for various types of spine disorders and individual patient symptoms. Nevertheless, the cost of treatment can be burdensome. Beyond the financial aspect, the most significant challenge for spine disorder patients is the reduction in their quality of life due to discomfort in daily activities. Since it's challenging to achieve a full recovery from spine disorders, and the pain associated with them can be severe, it's crucial to focus on proactive spine health management for a better quality of life.

Q6 How should you manage your spine after treatment for conditions like lumbar disc herniation?

A: Most spine conditions are rooted in degeneration. Even after surgery or treatment, if you don't make an effort to correct poor posture and engage in proper exercise, you may not address the root cause of degeneration. After treatment for spine conditions, it's advisable to avoid positions that flex the spine, maintain good posture, and engage in low-impact exercises that don't strain the spine. If you've had surgery, it's essential to rest adequately and start with light activities like walking. Both excessive rest and too much activity can have negative effects on your recovery, so it's crucial to consult with a specialist to determine the right timing and approach.

Q7 What causes muscles in the neck, shoulders, and back to tense up, and how does this affect the spine?

A: Muscle tension can have various causes, typically related to stress or excessive muscle tension. When muscles remain tense, they can compress nerves and blood vessels, leading to the accumulation of pain-inducing substances within the muscles. Since muscles provide support for the entire spine, tense muscles can lead to a decrease in muscular strength, limitations in movement, and an imbalance in the body. As we age, our ability to synthesize proteins and break down fat decreases, leading to muscle loss. This can result in a weaker support system for the spine, increasing the risk of spine disorders. Exercise is the only way to delay this degeneration of muscle tissue, so engaging in exercises, particularly core exercises that support the spine, is highly recommended.

Q8 What is the principle and effect of using heat therapy and massage for spine health?

A: Spine disorders are primarily caused by degeneration due to the load-bearing process of the spine. Heat therapy and massage can facilitate proper exercise for the spinal joints, reducing the load on the spine, thus contributing to the prevention of spine disorders. Additionally, these therapies can relieve muscle tension, alleviate pain, promote better posture, and improve blood circulation.

Q9 I'm curious about the principles and effects of traction therapy.

A: Traction therapy is a treatment method that involves applying a pulling force to the spine to alleviate pain. It's helpful to think of it as gently pulling the spine upward and downward. Traction therapy increases the space between the vertebrae, reducing the load on the discs and alleviating pressure on the nerves. This, in turn, can relieve pain and enhance joint mobility. Traction therapy is often used to stabilize patients with lumbar disc herniation and lumbar spinal stenosis. However, excessive traction can strain ligaments, so it's crucial to maintain a moderate level of force and seek advice from a specialist when necessary.

Q10 What kind of exercises can you do when your spine is not in good condition?

A: One of the most recommended exercises for people with an unhealthy spine is core exercises, particularly the "bridge" exercise. It doesn't require significant strength or balance and is suitable for almost everyone without putting excessive strain on the body. In the bridge exercise, you lie on your back with your knees bent and feet flat on the floor, then raise your hips off the ground while keeping your feet and shoulders on the floor. This activates the core muscles around the spine. Another exercise is the "McKenzie exercise," which can be done in a prone position. In this exercise, you relax and extend your upper body with your elbows and forearms on the ground, then lift your upper body while supporting it with your hands and lifting your head. Hold this position for about 5 seconds and repeat it 10 times. The McKenzie exercise can also be done while standing but lumbar spinal stenosis patients should seek professional guidance due to potential strain when extending the lower back.

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