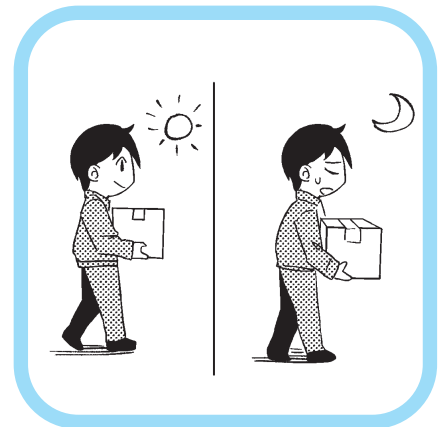
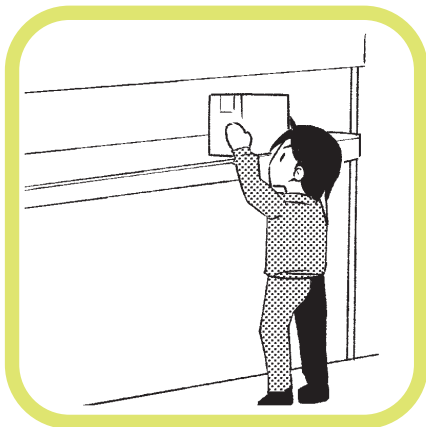
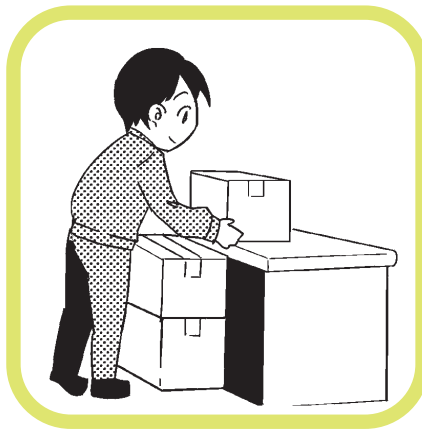
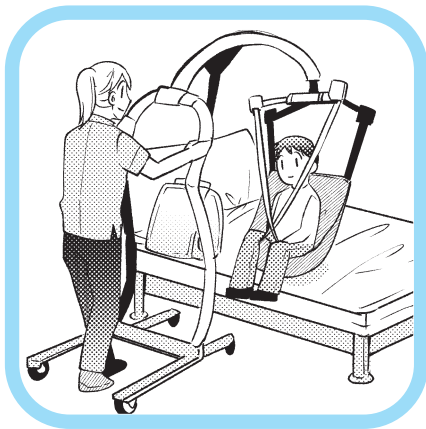


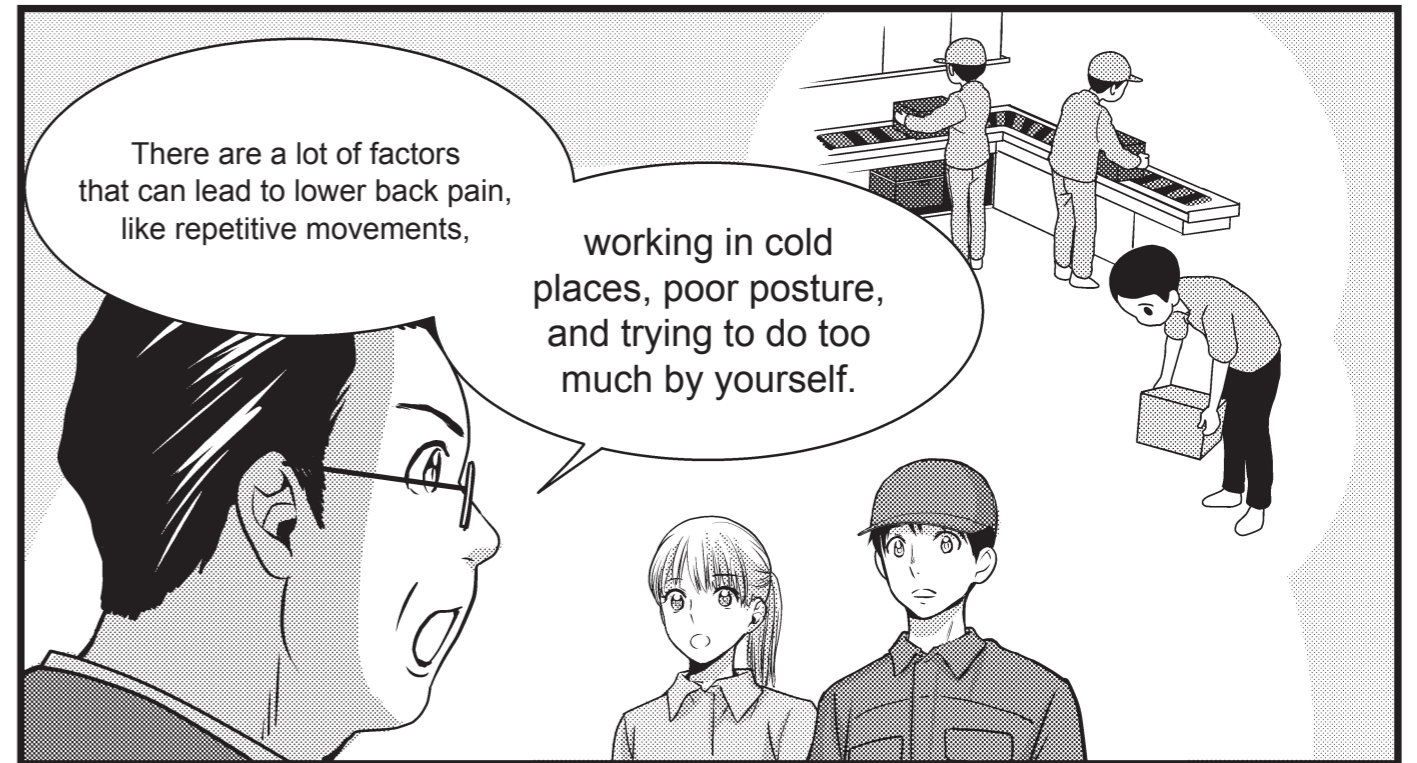
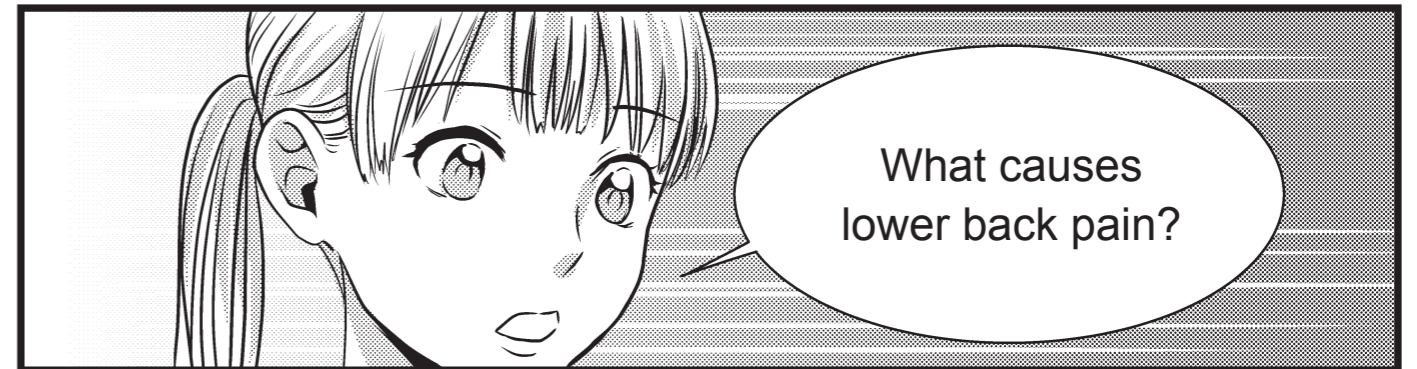
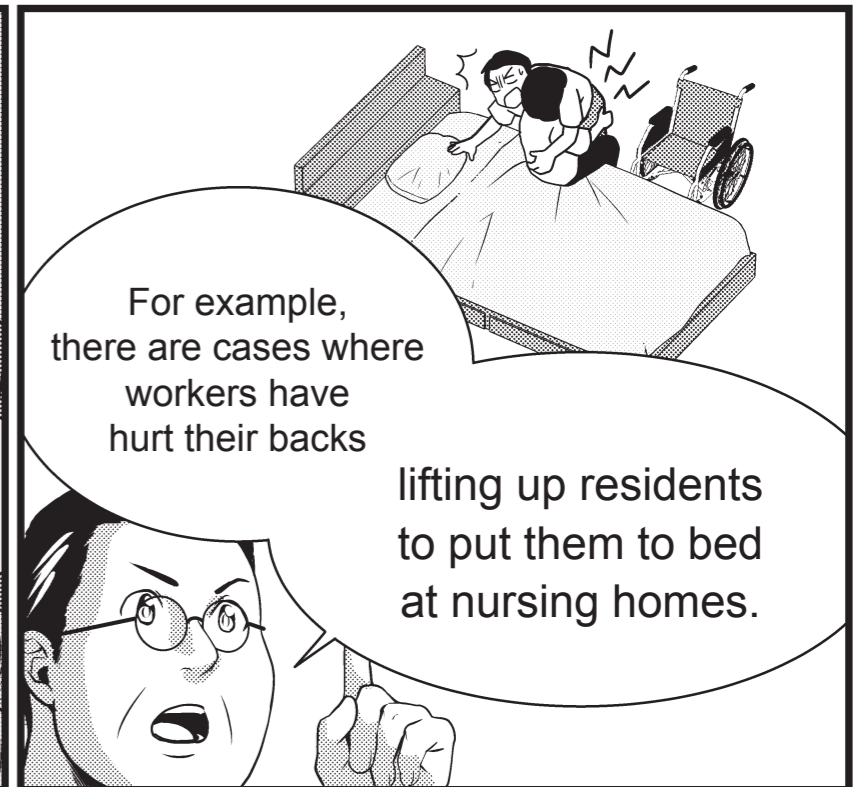
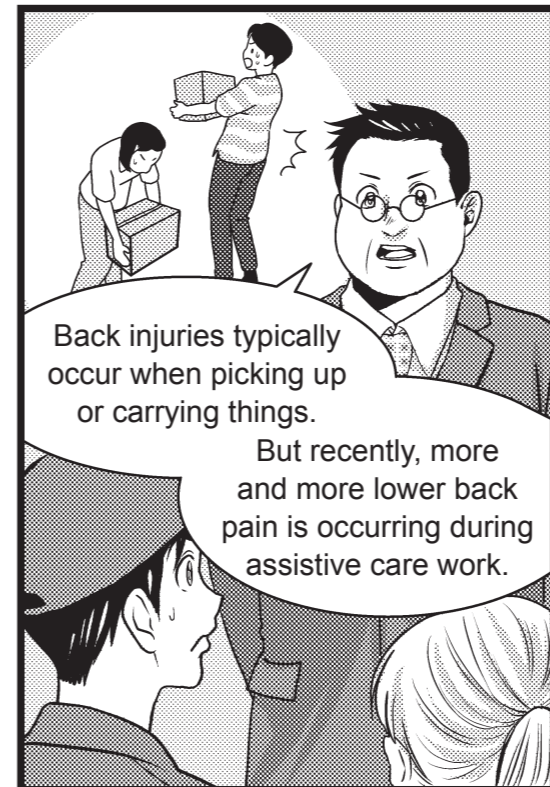
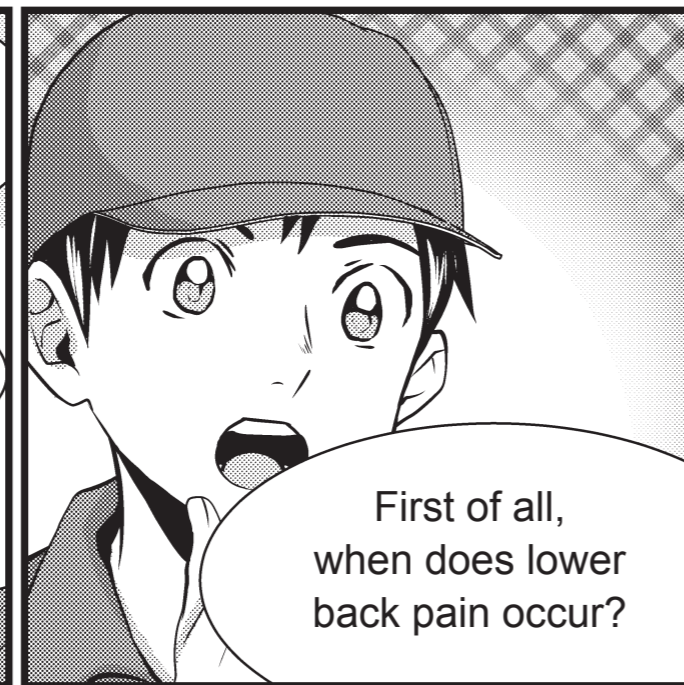
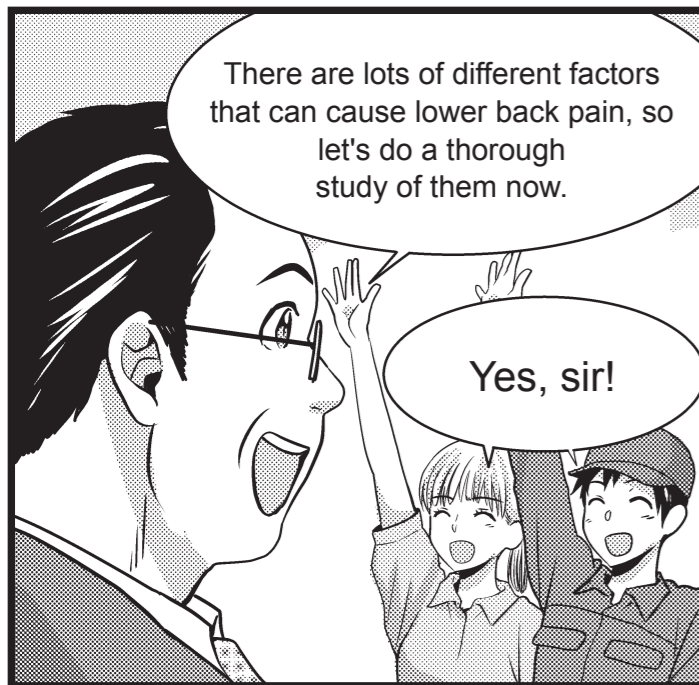
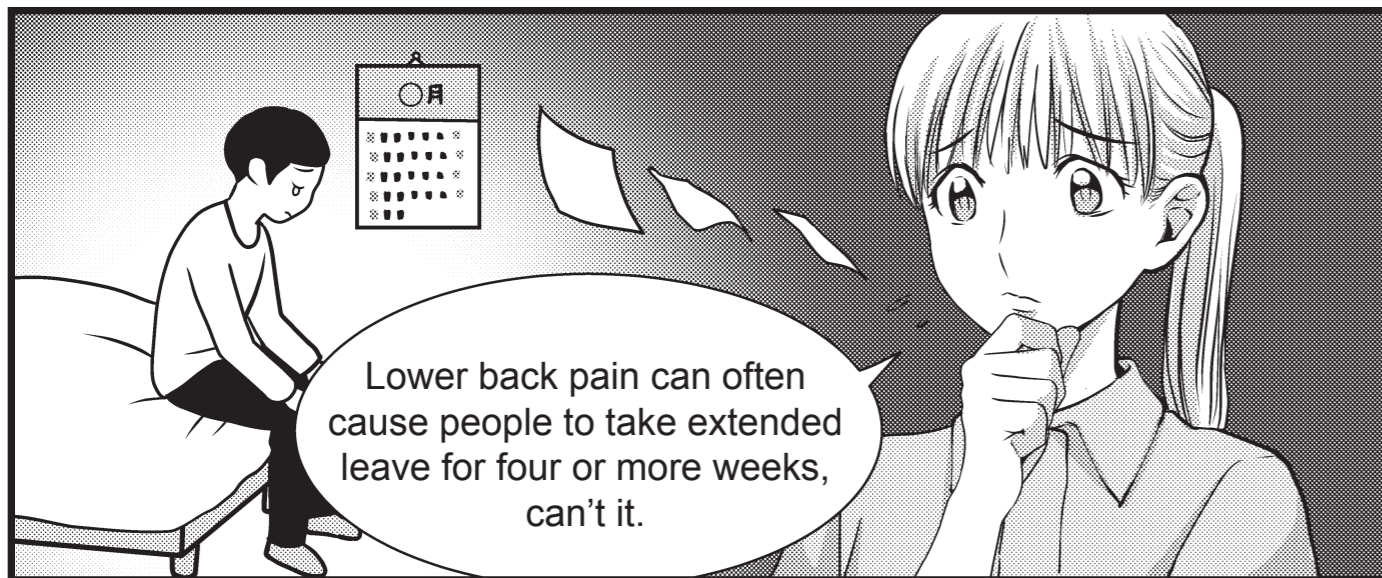
# 人や重量物の 運搬作業の基本

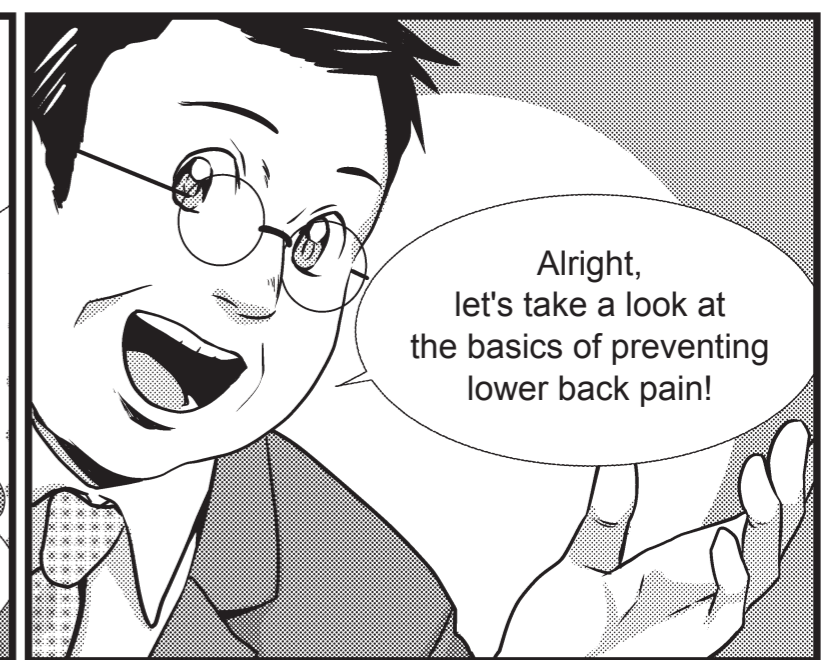
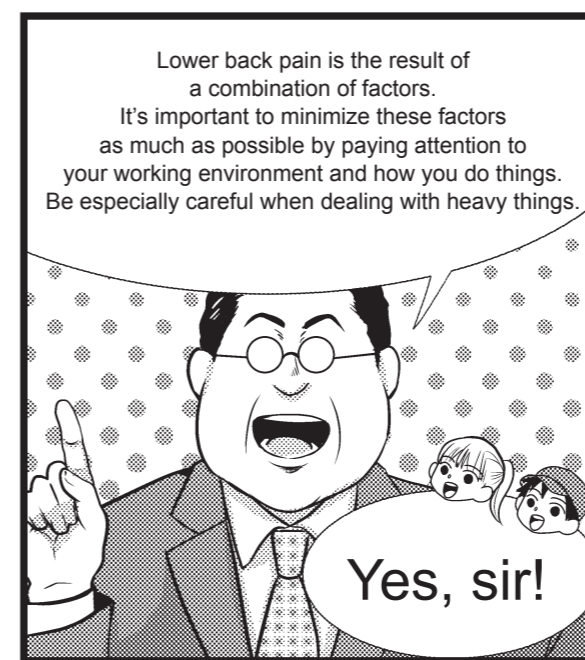
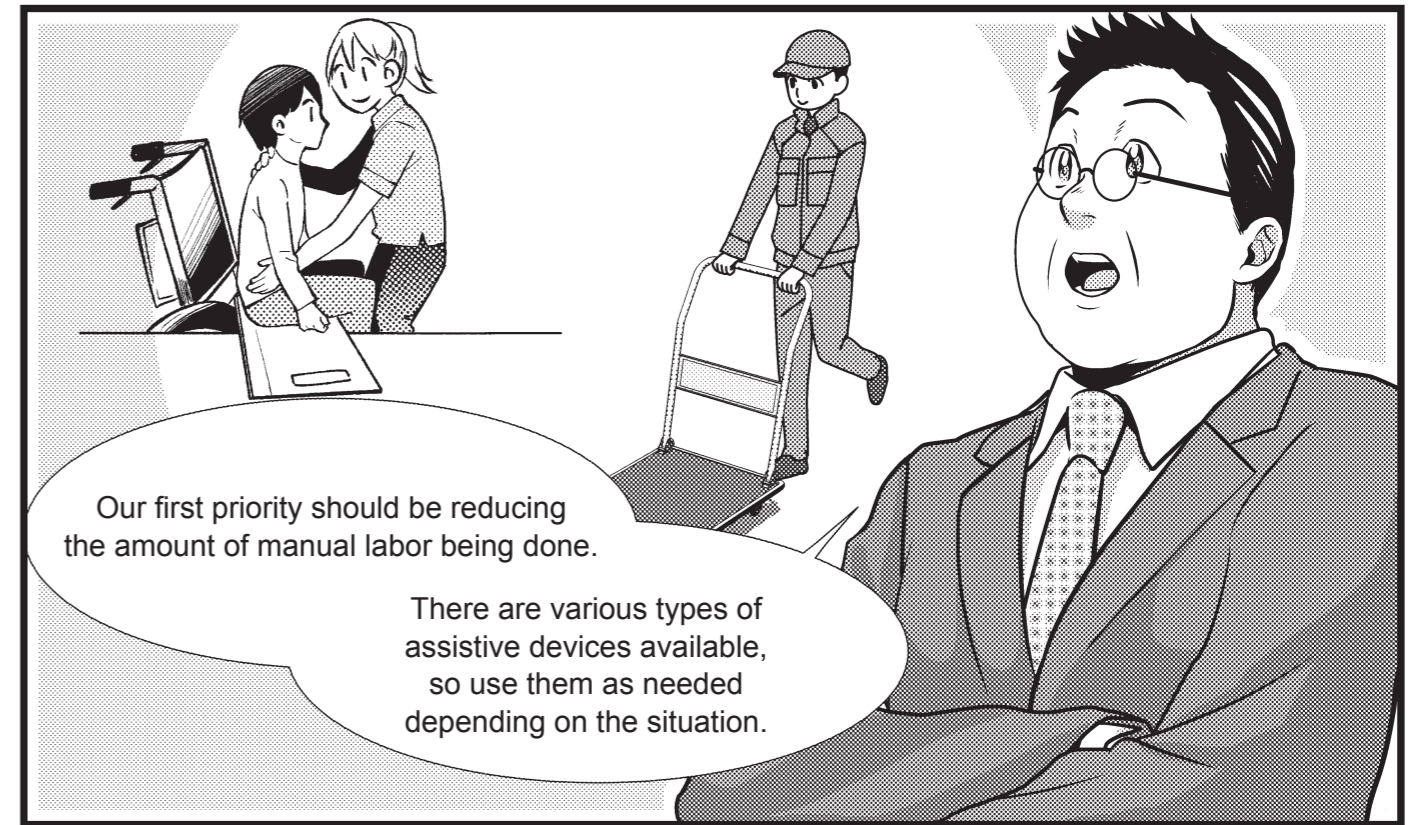
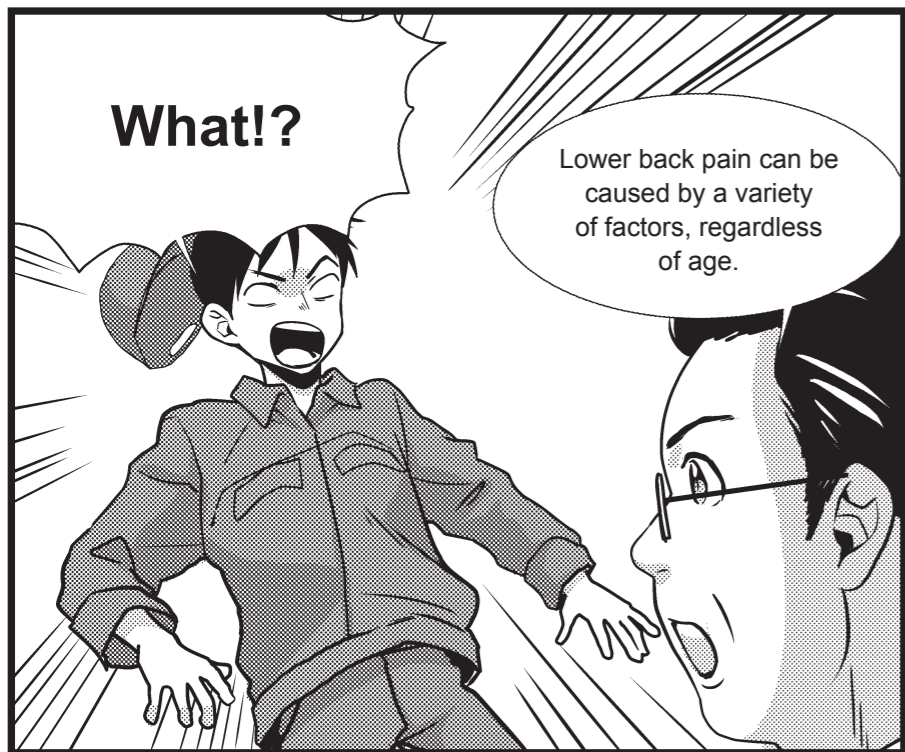
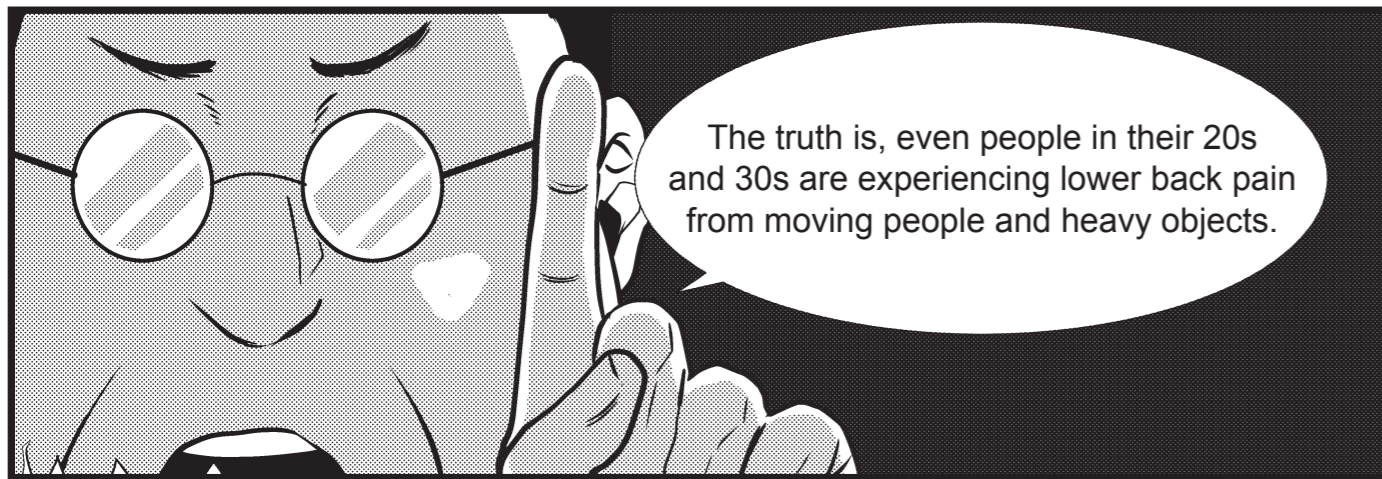
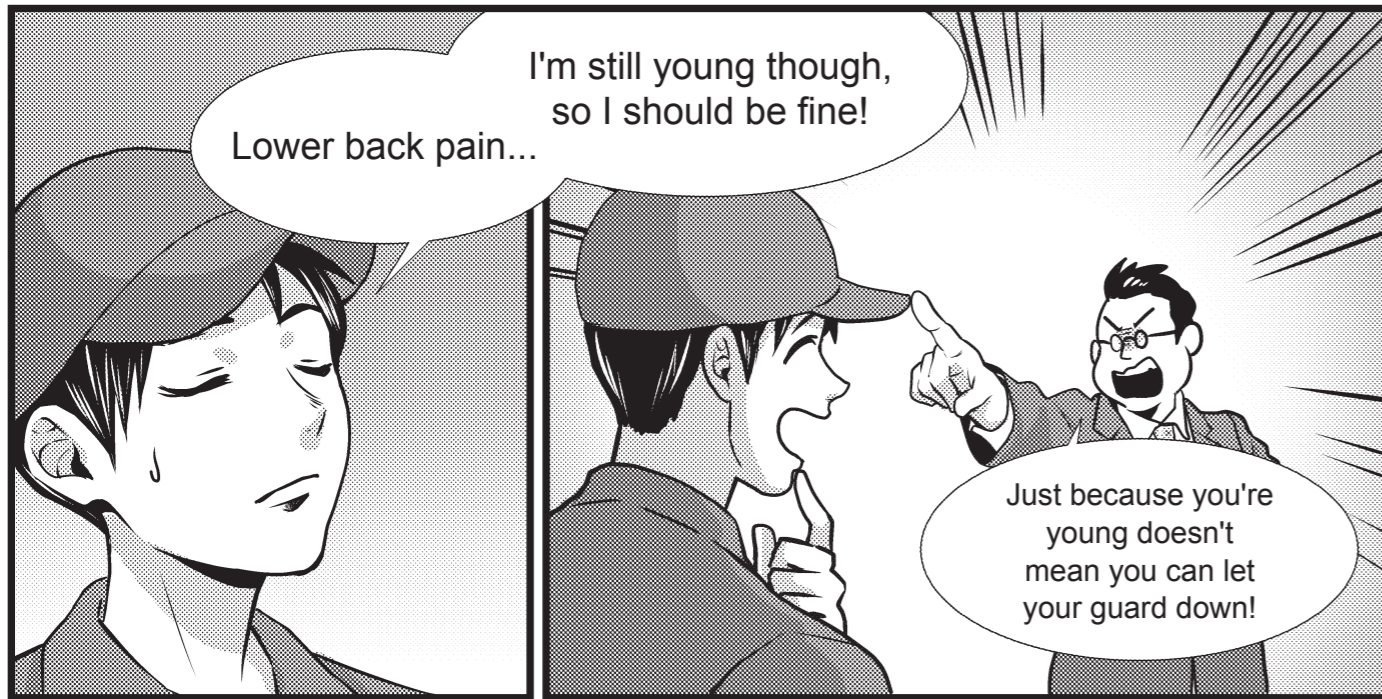
Learn Through Manga  
Basics of Moving People and Heavy Objects

English  
英語



These audiovisual materials have been prepared for the purpose of teaching the basics of safety and health for all workers who move people and heavy objects.





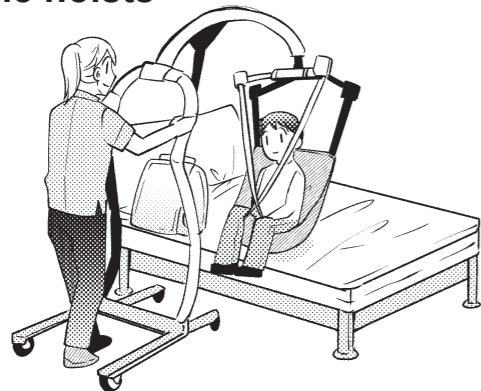
# Tools & Equipment

To prevent lower back pain, select tools and equipment to use based on the task.

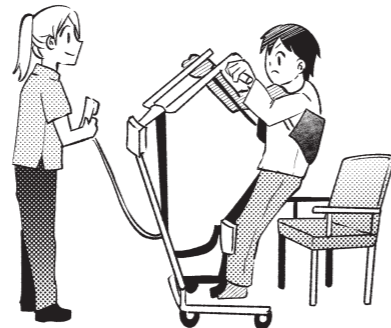


## Assistive Devices

Mobile hoists



Standing machines



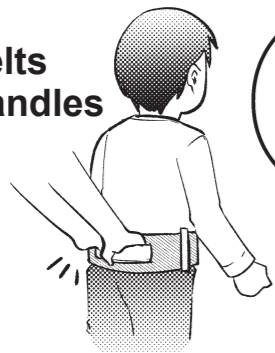
Slide sheets



Slide boards

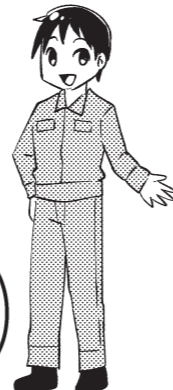


Gait belts with handles



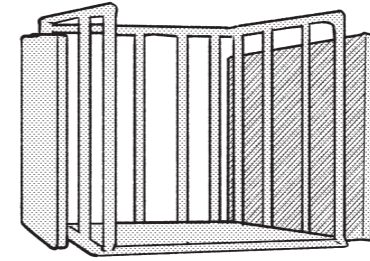
Recently, (powered) assist suits are also being worn

to enhance workers' physical capabilities and support caregiving!

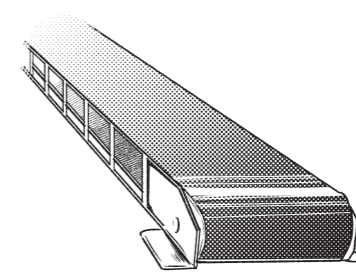


## Equipment for Moving Things

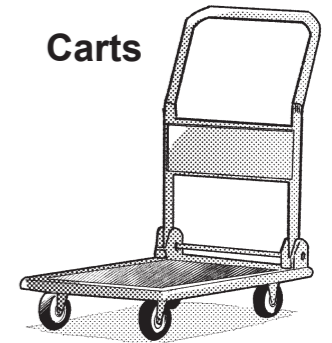
Lifters (elevating devices)



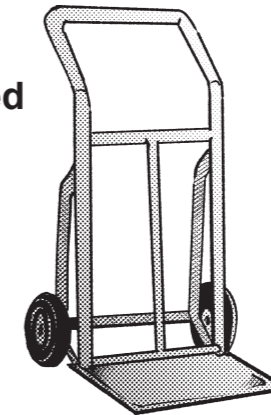
Conveyor belts



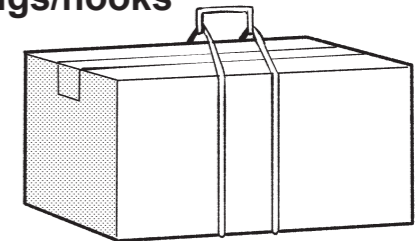
Carts



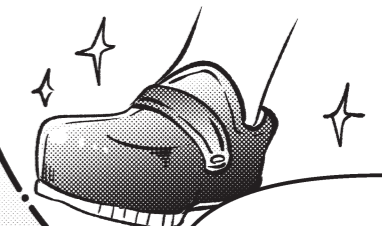
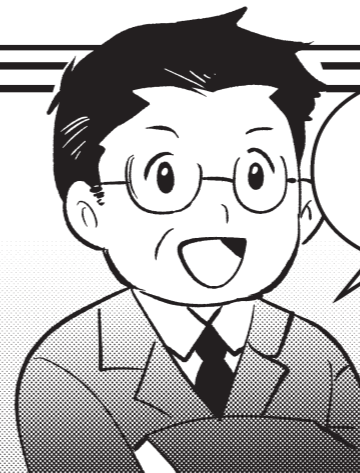
Two-wheeled carts



Jigs/hooks

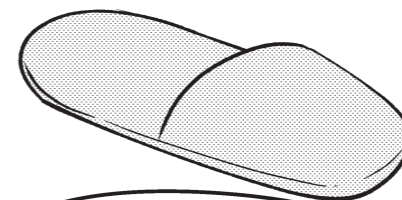


Proper attire is also important for preventing lower back pain.



Work shoes should be non-slip and the perfect size for your feet.

**NG**



Don't wear slippers indoors to do assistive care work.

Work clothes should be the right size and stretchy enough to not get in the way of your work.



# Weight

The heavier a load, the higher the risk of lower back pain.

Here's the criteria for appropriate weight.

The weight that can be handled by women 18 or older is determined by law.

**For intermittent tasks**

**Not permitted to carry more than 30kg**

**For continuous tasks**

**Not permitted to carry more than 20kg**

From the "Rules on Labour Standards for Women"

Here are some other guidelines for handling heavy objects.

While weight is something to be particularly cautious about, we also need to pay attention to other factors since lower back pain is caused by a combination of them.

## Guidelines for Handling Heavy Objects

**Men: 40% or less of body weight**

For a man weighing 65kg:

**26.0kg**

**Women: 24% or less of body weight (40% less than men)**

For a woman weighing 55kg:

**13.2kg**

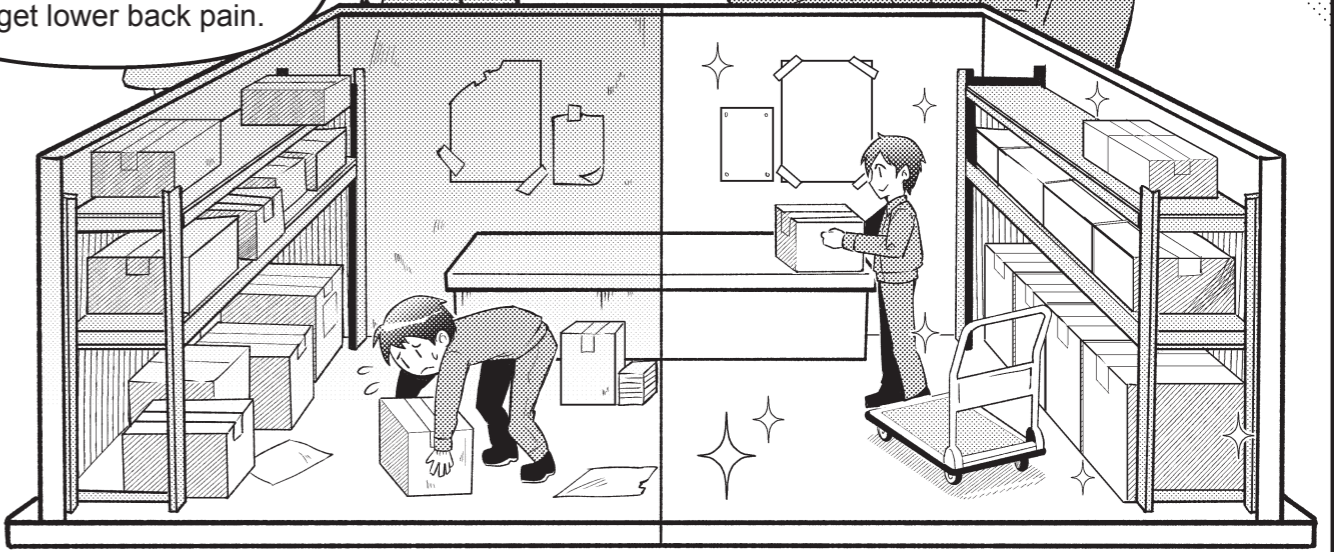
# Preventing Lower Back Pain

Lower back pain is often caused by a combination of multiple factors.

It's important to minimize these factors as much as possible to prevent it.

We want to make our workplace one that doesn't strain our backs regularly.

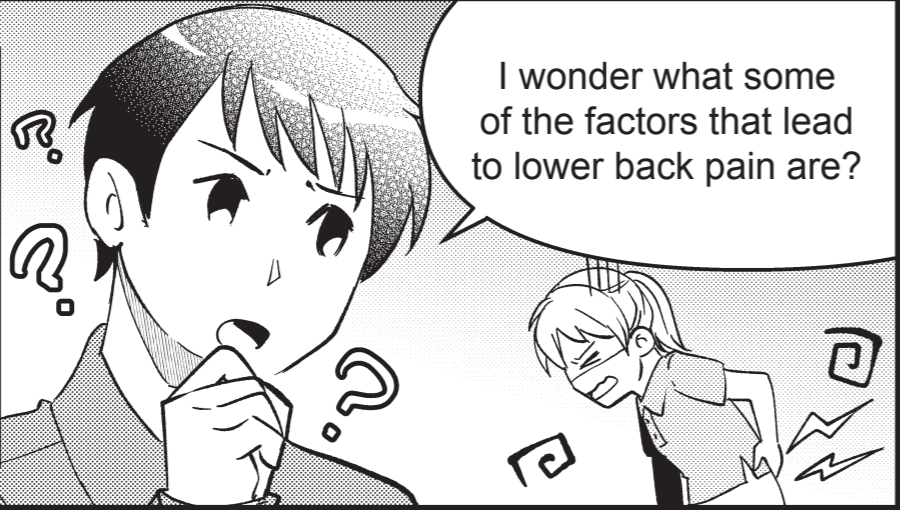
In other words, even if you watch out for just a single factor, you might still get lower back pain.



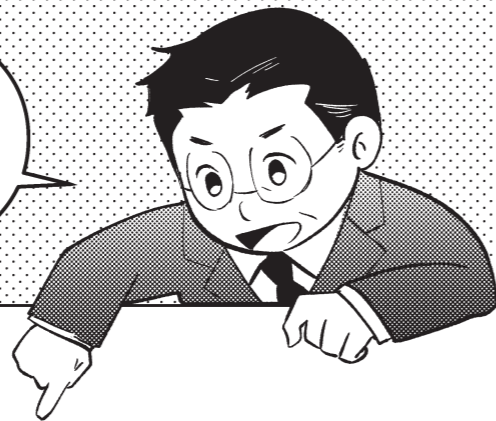
But what are some of the causes of lower back pain?

Alright! Let's look at some specific factors causing lower back pain on the next page!

# Factors



There are a variety of factors, but I'll break them down into four main categories here.



## Operational & Work Factors

<b>Handling heavy objects</b> 	<b>Lifting people up manually</b> 	<b>Unnatural postures</b> 
<b>Sudden or inadvertent movement</b> 	<b>Repetitive movement</b> 	<b>Time spent handling things</b> 
<b>Height heavy objects are handled at</b> 	<b>Distance between you and heavy objects</b> 	

Aside from these, working in the same position for long periods of time and vibrations from cars and other vehicles can also cause lower back pain.

## Environmental Factors

<b>Temperature, etc.</b> 	<b>Floor conditions</b> 	<b>Work space and equipment layout</b> 
------------------------------	-----------------------------	--

Pain is more likely to occur when working in dark places or under conditions that make it hard to take time off.

## Personal Factors

**Age and sex**

Others:

- Past medical history and underlying diseases
- Physique
- Muscular strength, etc.

## Psychological & Social Factors

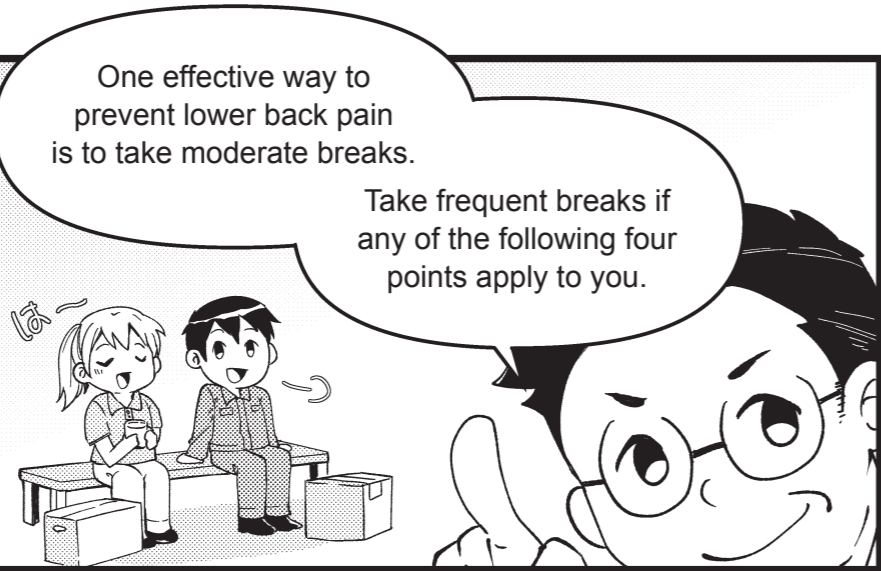
- Lack of job satisfaction or fulfillment
- Lack of support from superiors and colleagues
- Interpersonal problems
- Problems with business partners or clients of interpersonal services, etc.

You can minimize the factors causing lower back pain by selecting weights and how you carry things based on your physique.

I'm short, so if I need to get something high up, I should use a stepladder.

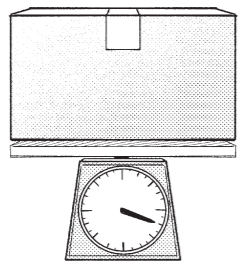
It's important to avoid these factors causing back pain as much as possible.

# Prevention (General)



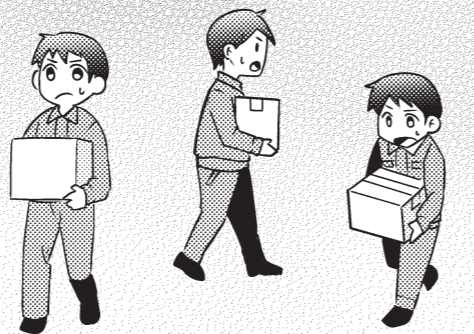
## Weight

Are you carrying a heavier load than you normally do?



## Frequency

Are you moving things more often than you normally do?



## Distance

Are you moving things longer distances than you normally do?



## Speed

Are you moving things in more of a hurry than you normally do?

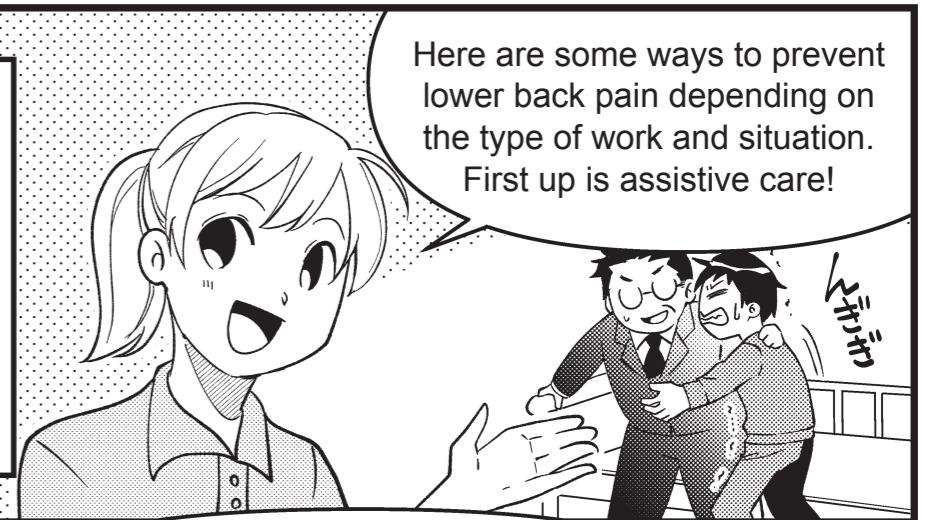


It's also good to stretch while you're on break!



If you feel any sort of discomfort, you should rest right away.

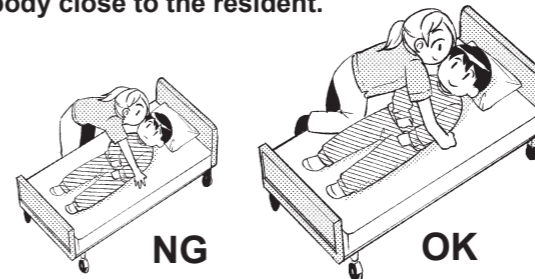
# Prevention (Assistive Care)



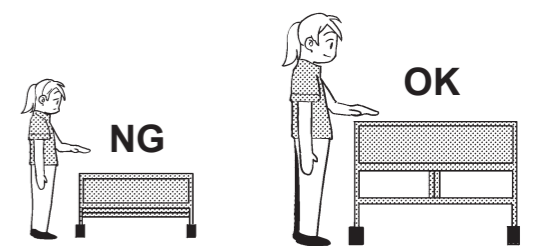
## Cautions for Posture and Movements

First of all, it's important to adjust our surroundings and work methods so that we don't get into these types of postures.

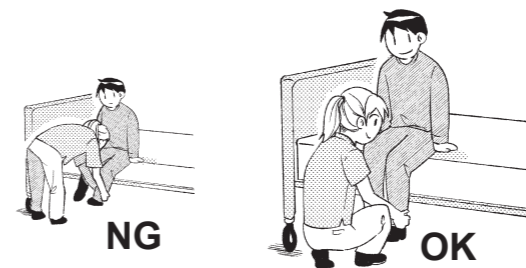
When working, keep your body close to the resident.



Raise the height of your work surface.



When you get low, bend your knees.



Avoid twisting your body when providing care.

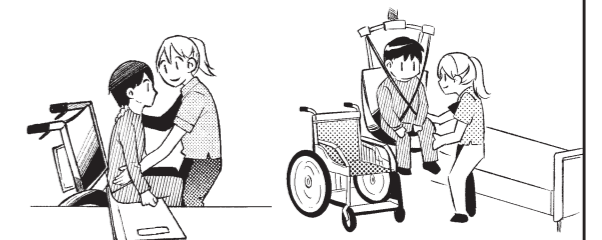


## Other Points of Caution

Residents should be carried by 2 or more caregivers whenever possible.



Make use of assistive devices.



\*See the Assistive Devices page for more details.

## Prevention (Carrying Things)

Next, let's take a look at the proper way to carry things when there's no choice but to do it manually!



### Pay Attention to Posture and Movements

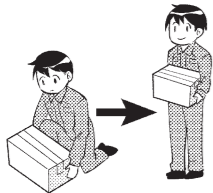
You can prevent lower back pain by paying attention to your posture and movements, but adjust your surroundings and work methods to be less stressful on your back to begin with.



Keep your body as close to what you're carrying as possible and assume a posture that keeps your center of gravity low.



When lifting things, control your breath and focus on your abdominal muscles.



When lifting things off the ground, keep these two steps in mind:  
(1) Put one foot in front of the other, bend the knee, and lower your hips.  
(2) Grab the things in hand, extend your knees, and stand up.



When carrying things, make sure to keep your back straight and avoid twisting your waist.

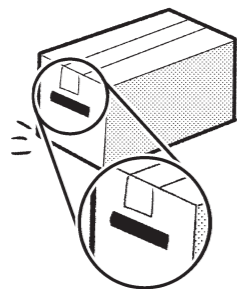
### Get Creative in Carrying Things

When carrying things that can slip easily, try to make them easier to carry.

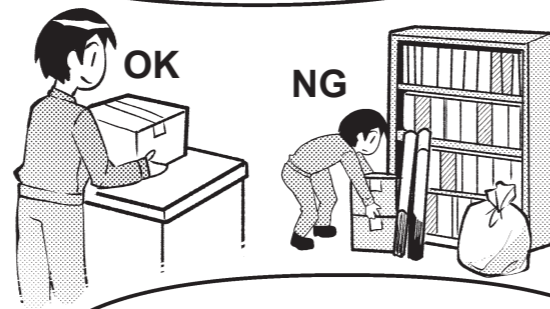
Wear non-slip gloves.



Make or attach a handle.



Take precautions ahead of time to avoid unnatural postures, like paying attention to the height things are placed at and avoiding leaving objects in the way in front of shelves.



And regular exercise can help prevent lower back pain too!

## Adjusting Your Surroundings

Sometimes, no matter how careful you are, you can still get lower back pain.

Let's consider how we can adjust our surrounds to make lower back pain less likely to occur by running through the PDCA cycle.



PDCA is a continuous business improvement method done by repeating the Plan, Do, Check, and Action cycle.

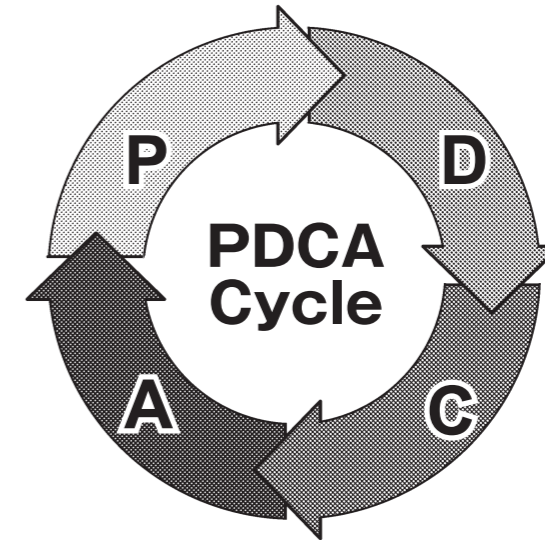


### Plan

<Example>  
Rule set saying that carts should always be used to carry things.

### Action

<Example>  
If there are not enough carts, report it to your supervisor and consult with them. Rule changed to say that two or more people should carry things when a cart is not available.



### Do

<Example>  
Communicated the rule internally and requested thorough compliance.

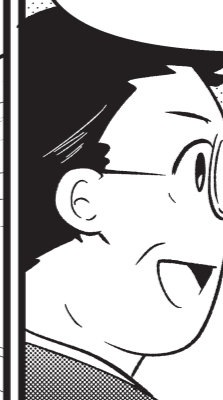
### Check

<Example>  
There was a case where there were not enough carts, and lower back pain was caused by someone carrying things manually.

I hope that everyone in the workplace working together can reduce the amount of people getting lower back pain.



Next up, let's look at some real life examples!



Yes, sir!



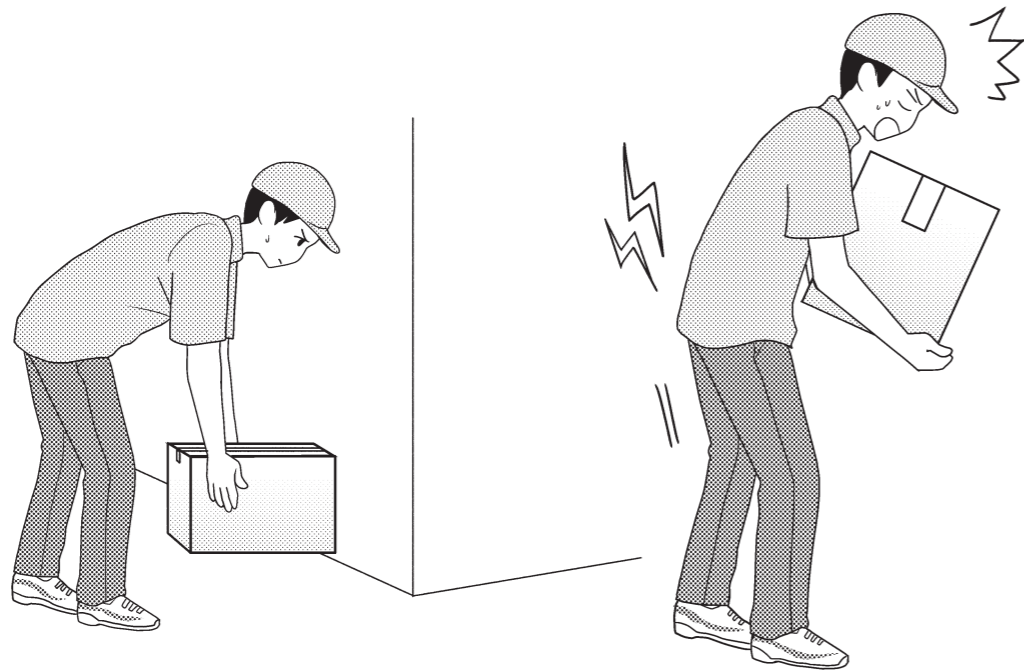


# Case 1

## Lifting Things Up

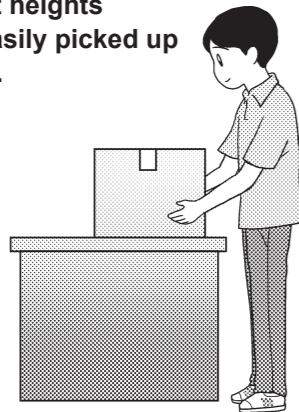
### Situation

A worker tried to lift something off the floor.



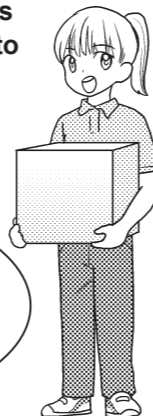
### Countermeasure

- 1 Try to place things at heights where they can be easily picked up as much as possible.



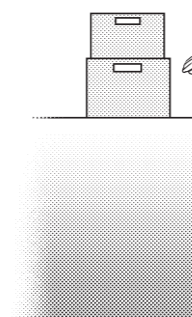
- 2 Adhere to the weight standards when you have no choice but to carry something manually.

See our Weight page for the appropriate standards!

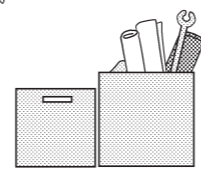


- 3 If you need to place things on the floor, place the most frequently handled items at elbow level and the less frequently handled items on the floor.

High Frequency



Low Frequency

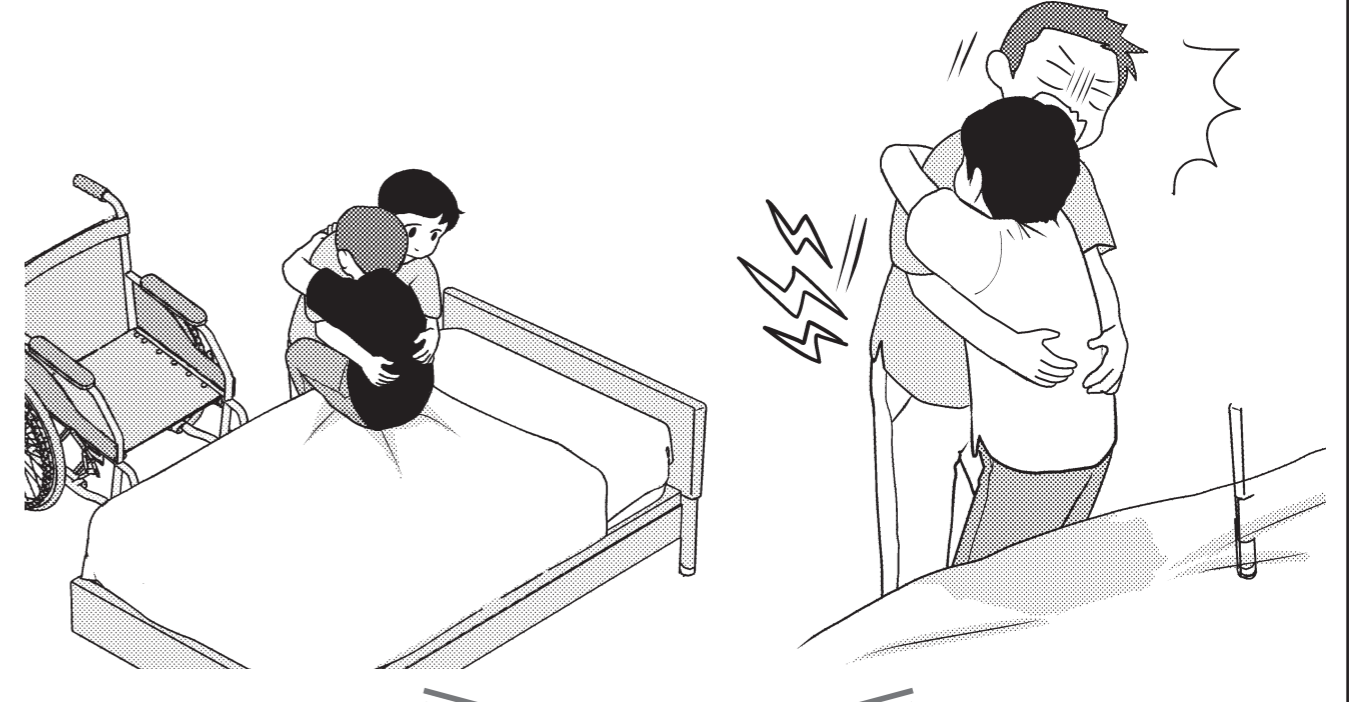


# Case 2

## Assisting Others

### Situation

A worker at a nursing home tried to assist a resident by himself.



### Countermeasure

- 1 Utilize assistive devices.



- 2 Adjust your working environment.



- 3 For larger residents, don't overdo yourself and have two or more people assist them.



- 4 Maintain a posture that is easy on your back.

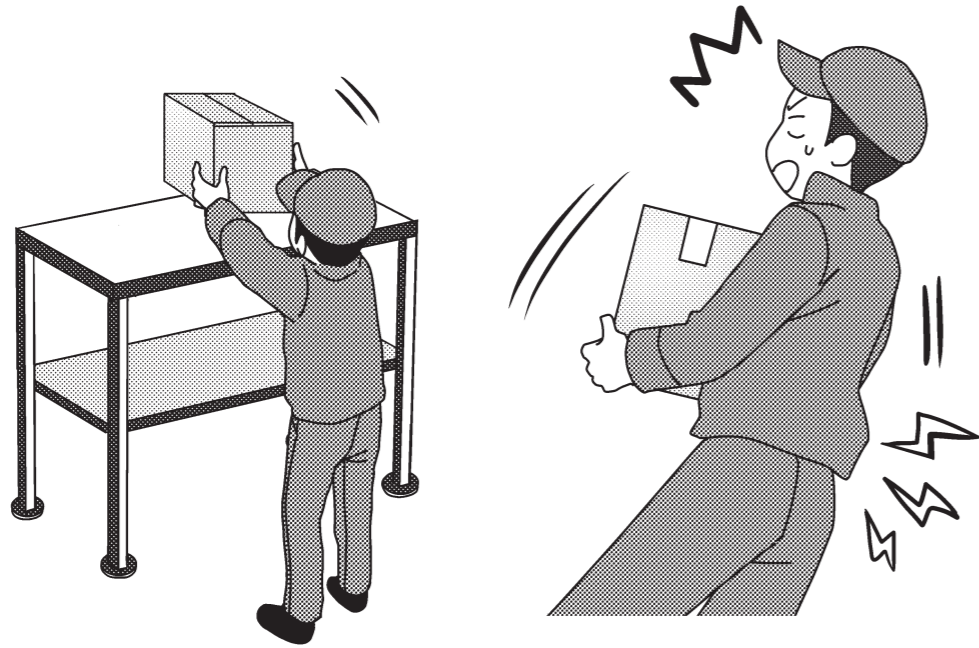


Case **3**

# Moving Things Stacked High

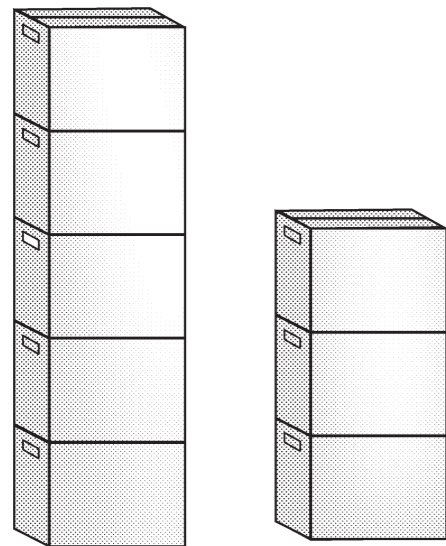
**Situation**

A worker tried to move something high up by himself.

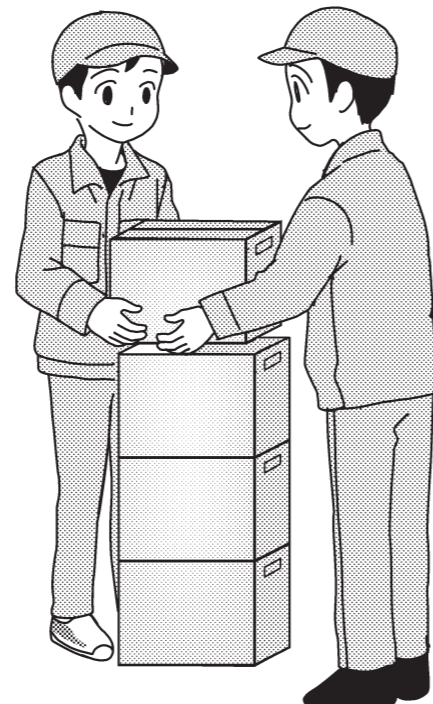


## Countermeasure

**1** Try not to pile things up high as much as possible.



**2** Things placed high or low should be carried by two or more people of similar heights.

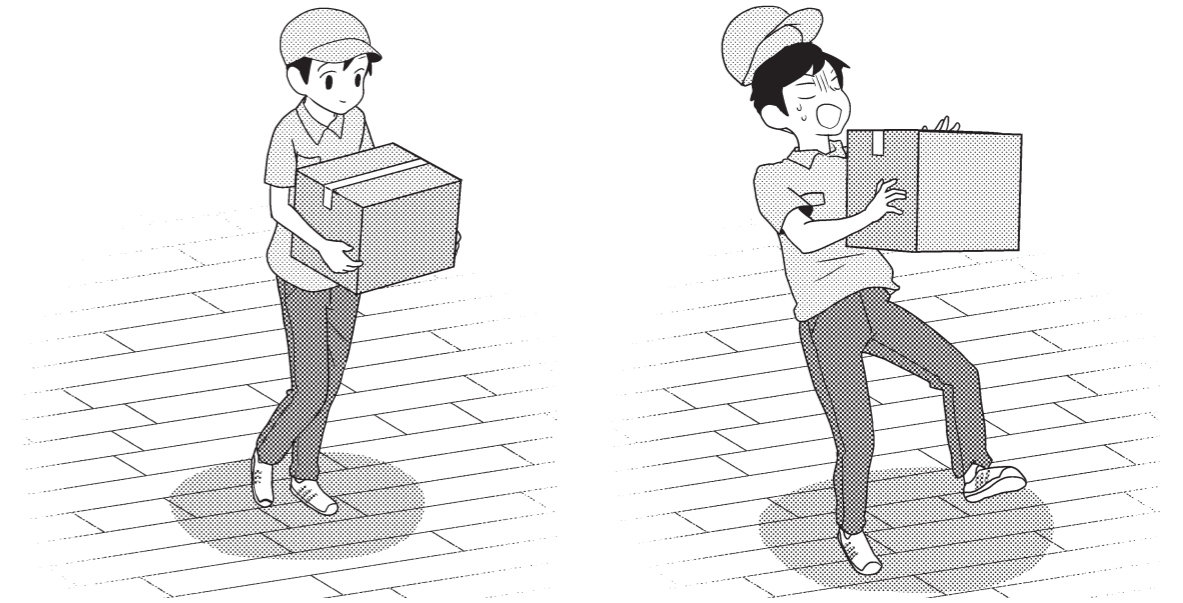


Case **4**

# Working on Slippery Surfaces / With Shoes On

**Situation**

A worker carried things on a wet surface while wearing slippery shoes.

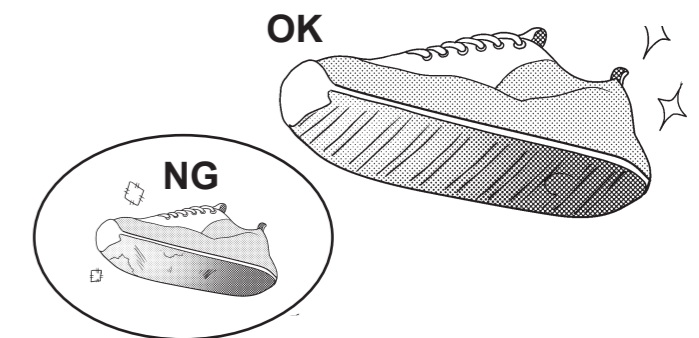


## Countermeasure

**1** Wipe the floor when wet.

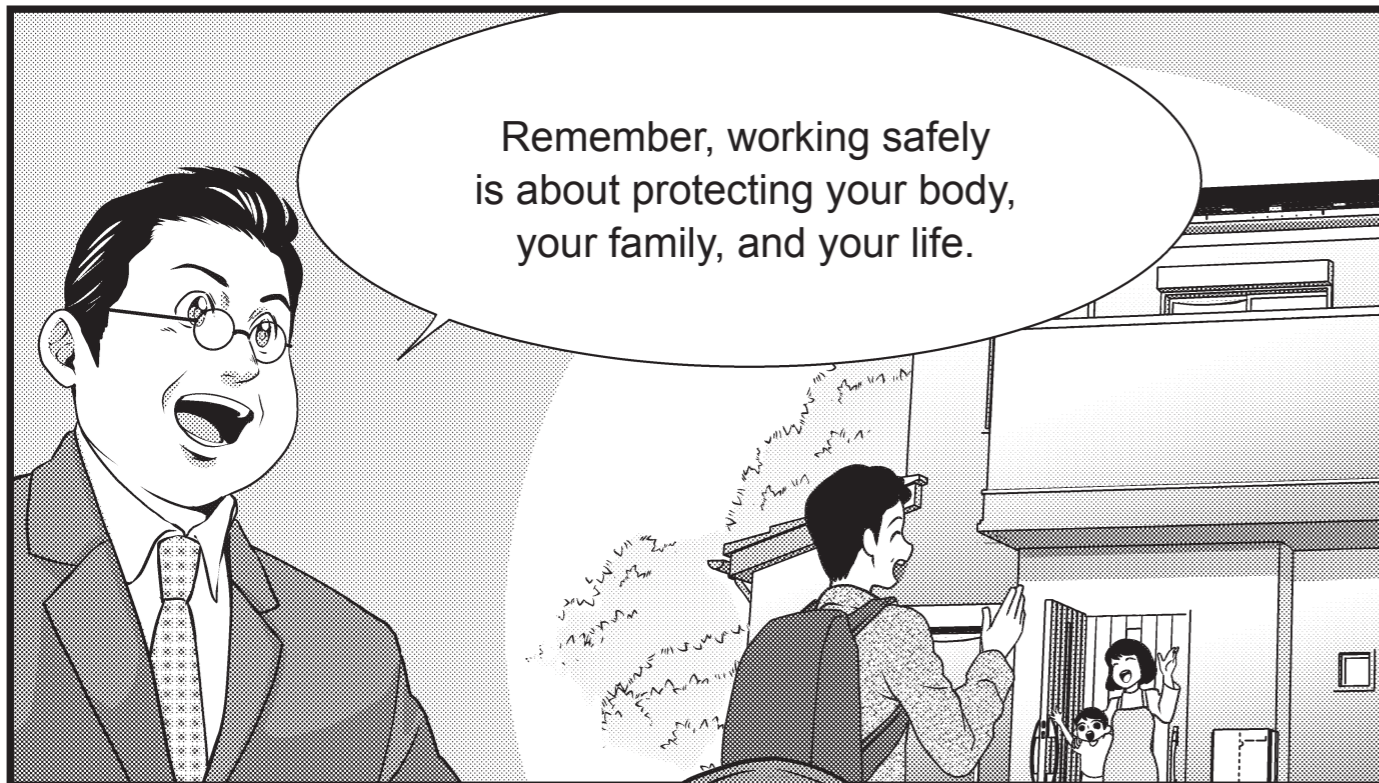
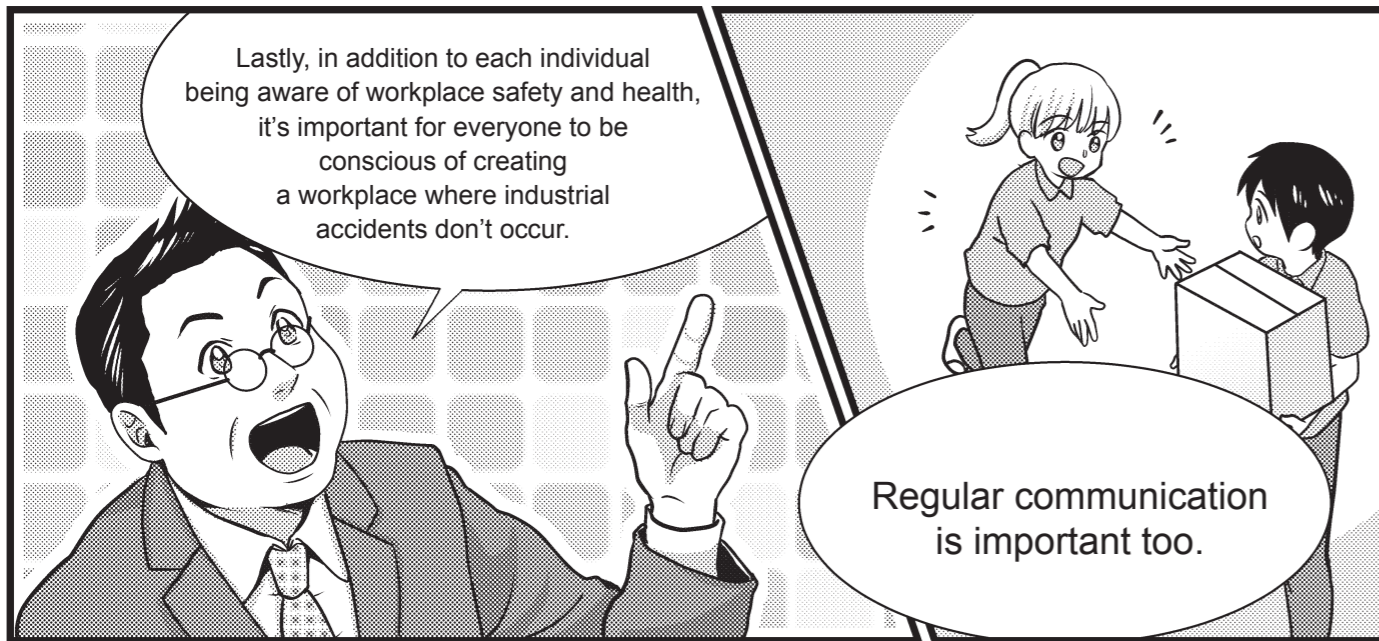


**2** Wear non-slip shoes when working.



**3** Don't lift things from unnatural positions.





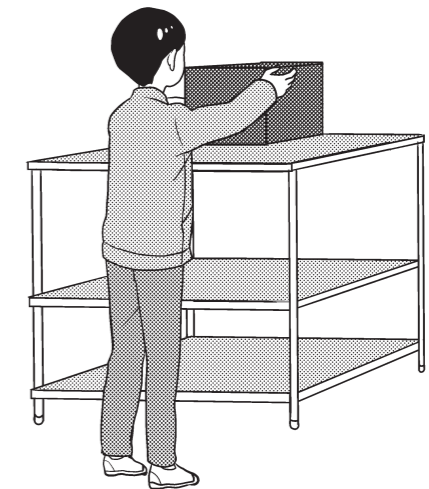
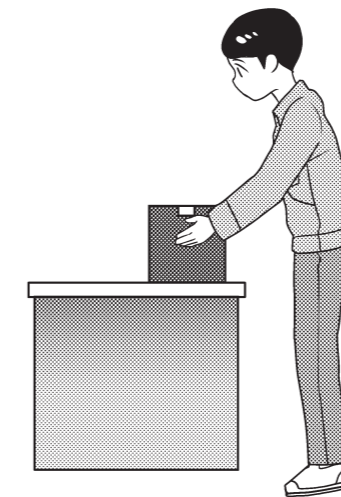
**Which is less likely to cause lower back pain when moving the things below?**

**1** Height

Around the waist

**or**

Around the shoulders

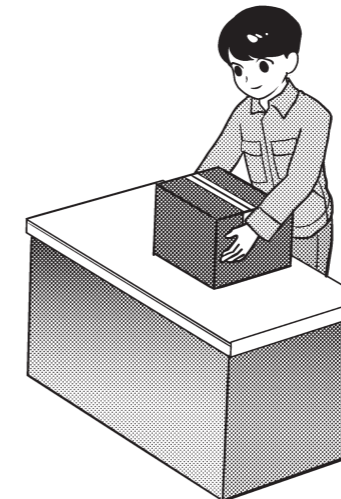


**2** Distance

Close to your body

**or**

Far from your body





**Learn Through Manga**  
**Basics of Moving People and Heavy Objects**

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