PROCEDURE

Percussion

Percussion is a physical examination technique that uses gentle tapping to assess tissues beneath the skin.

PURPOSE
Estimate air, fluid, or solid tissue beneath the body surface

PROCEDURE TYPE
Diagnostic - bedside physical examination by tapping the body

WHERE IT IS DONE
Outpatient clinic, hospital room, or emergency department

ANAESTHESIA
None

HOW LONG IT TAKES
Usually 1 to 5 minutes per body area

PREPARATION
Usually none; expose only the area being examined

RECOVERY
Immediate; no driving restriction

MAIN RISKS
Brief discomfort, skin irritation, inaccurate or inconclusive findings

RESULTS
Usually explained immediately as part of the examination

Overview

Percussion is part of a physical examination. A healthcare professional gently taps an area of your body and listens to the sound it makes. They may also feel how the tapping travels through the body.

Different tissues produce different sounds. Air-filled areas usually sound more hollow or resonant. Fluid and solid tissue tend to make a quieter, duller sound.

Percussion is most often used to examine the chest or abdomen. It can help estimate lung borders, assess whether an area may contain extra air or fluid, or examine the size of organs such as the liver. It may also be used over the back to check for tenderness near the kidneys.

Percussion provides clues rather than a final diagnosis. Findings are interpreted alongside your

symptoms, medical history, and other parts of the examination. Imaging or laboratory tests may still be needed.

This diagnostic examination is different from chest physiotherapy percussion , in which repeated tapping is used to help loosen mucus.

Why the procedure is performed

A healthcare professional may use percussion when examining breathing problems, abdominal symptoms, or pain in the back or side.

For the chest, percussion may help identify areas that sound different from the surrounding lung. A dull sound can occur when an area contains less air than expected, while an unusually hollow sound may suggest more air. Several conditions can produce either finding, so percussion alone cannot identify the cause.

For the abdomen, percussion can help estimate the size of the liver or assess how air and fluid are distributed. Tapping over the lower back may be used to see whether the area around a kidney is tender.

Percussion may also be repeated during follow-up to look for a change in examination findings. It does not replace imaging when a more detailed view is necessary.

Who should and should not have it

Percussion may be appropriate when your healthcare professional needs information about the chest, abdomen, or nearby organs as part of an examination. It is quick, does not use radiation, and can usually be performed wherever you are being assessed.

There are few reasons to avoid percussion entirely. However, the examiner may delay, modify, or skip it over an area with:

Tell the examiner if you bruise easily, take medicine that affects blood clotting, or have had recent surgery. Gentle percussion is unlikely to cause injury, but this information helps them examine you safely.

Percussion is not the right only test when a condition needs to be confirmed or ruled out. Body shape, muscle, movement, pain, and background noise can affect the sounds. Imaging or other tests may provide more reliable detail.

- A suspected fracture or recent physical injury

- Severe tenderness or unexplained pain
- A burn, open wound, infection, or fragile skin
- Recent surgery or a healing incision
- A medical device that could be uncomfortable when tapped

How to prepare

Percussion usually requires no special preparation. You can generally eat, drink, and take your usual medicines unless another planned test requires different instructions.

The treating facility's own instructions take priority.

Wear clothing that is easy to move or remove from the area being examined. Percussion is most accurate when performed directly on the skin, but you should only uncover the necessary area. You may ask for a gown, drape, or chaperone.

Before the examination, tell the healthcare professional about painful areas, wounds, recent surgery, or injuries.

What happens during the procedure

Your position will depend on the area being examined. You may sit upright for a chest examination or lie down for an abdominal examination. You could be asked to turn, lean forward, or take slow breaths.

The usual technique is called indirect percussion. The examiner places one finger firmly against your skin, then taps that finger with a finger from the other hand. They compare the sound from one location with sounds from nearby or matching areas.

Chest percussion usually follows a pattern across both sides of your chest and back. This allows the examiner to compare similar areas of the lungs.

During abdominal percussion, the examiner may tap across several areas. Air in the bowel often makes a drum-like sound called tympany . Solid organs and fluid usually produce dullness , meaning a softer, less hollow sound.

For kidney-area tenderness, the examiner may place one hand over your back and tap it gently with the other hand. Tell them immediately if this causes pain.

Recovery and what to expect afterward

Percussion should not cause ongoing pain. A tender or injured area may hurt briefly when tapped. Let the examiner know so they can stop or use a gentler method.

You can eat and drink normally afterward unless you have separate restrictions for another test or treatment.

There are no usual activity limits. You can return to exercise and other normal activities right away.

Percussion does not involve sedation or anaesthesia, so it does not prevent you from driving.

Most people can return to work immediately. If you are unwell, your ability to work will be based on the underlying symptoms or any other tests you receive, not on percussion itself.

Risks and possible complications

Percussion is non-invasive, meaning nothing enters your body. Significant physical complications are not expected.

Possible concerns include:

The main limitation is that percussion cannot show exactly what is happening beneath the skin. Normal percussion does not rule out every condition, and an unusual sound does not confirm one. Further testing may be needed if your symptoms or other examination findings are concerning.

- Brief discomfort over a sore or inflamed area
- Minor skin irritation or tenderness
- Bruising in someone with very fragile skin or a bleeding tendency
- An inaccurate or inconclusive finding

Results and follow up

The examiner hears and interprets the sounds during the procedure. They can often explain the findings immediately.

A finding may be described as resonant, dull, flat, or tympanic. These words describe the quality of the sound; they are not diagnoses by themselves.

Your follow-up may involve no further testing if the whole examination is reassuring. If more information is needed, your healthcare professional may arrange imaging, breathing tests,

blood tests, urine tests, or another assessment.

Ask when and how you will receive results from any additional tests. Routine follow-up should also include discussion of symptoms that continue, return, or do not improve as expected.

Alternatives

The alternatives depend on what the examination is trying to assess. They may include:

These options are not always interchangeable. Percussion is immediate and convenient, but imaging usually provides more precise anatomical information.

- Listening with a stethoscope: Quick and painless, but provides different information and may also miss subtle problems
- Palpation: Uses the hands to feel for tenderness, movement, or organ borders, but cannot clearly assess deeper structures
- Ultrasound: Shows fluid and many organs in real time without radiation, but requires equipment and trained interpretation
- X-ray: Provides a clearer view of the chest than percussion, but uses a small amount of radiation
- CT scan: Gives more detailed images, but uses more radiation and may require contrast dye
- Breathing tests: Measure airflow and lung function, but do not directly show fluid or structural changes
- Blood or urine tests: May identify inflammation or organ problems, but do not show anatomy

When to call your healthcare team

Routine follow-up is appropriate if you have questions about what was found, are waiting for another test, or your original symptoms continue or return. Contact your healthcare team if tapping caused unexpected pain, swelling, or bruising that does not settle.

Percussion itself rarely causes urgent problems. However, the symptoms that led to your examination may need prompt attention.

Seek urgent medical advice for worsening shortness of breath, increasing abdominal pain, persistent vomiting, fever with worsening illness, or new blood in your urine.

Call emergency services for severe trouble breathing, blue or grey lips, fainting, new severe chest pain, vomiting blood, black stools with weakness, or sudden severe abdominal pain. Do not wait for a routine follow-up appointment.

Common questions

Will I be asleep?

No. Percussion is performed while you are awake and does not require anaesthesia or sedation. You may be asked to change position or breathe in and out.

Can I drive home?

Yes. Percussion does not affect alertness or coordination. A driving restriction would apply only if you also had sedation, received certain medicines, or underwent another procedure.

How painful is it?

It is usually painless and feels like light tapping. It may be uncomfortable over an injured, inflamed, or already painful area. Tell the examiner if it hurts.

When will I know the result?

Usually immediately. The examiner may explain whether the sounds were expected or whether another test is needed. Results from imaging or laboratory tests take longer.

What does a dull sound mean?

Dullness means the area sounds less hollow than expected. Fluid, solid tissue, an organ, or reduced air can cause it. The meaning depends on the location and the rest of your examination.

Is this the same as chest percussion for mucus?

No. Diagnostic percussion uses a small number of taps to assess underlying tissues. Chest physiotherapy uses repeated tapping or mechanical vibration to help move mucus from the airways.

Sources

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