TEST

Lymph node culture

A lymph node culture grows germs from lymph node fluid or tissue to help identify an infection.

WHAT IT MEASURES
Growth of bacteria, fungi, or mycobacteria from lymph node material

SAMPLE
Lymph node fluid or tissue

FASTING NEEDED?
Sometimes, when sedation or general anesthesia is planned

HOW LONG IT TAKES
About 15-60 minutes, longer for some surgical biopsies

RESULTS IN
Several days to weeks, varying by organism and laboratory

USED FOR
Diagnosis

MAIN LIMITATION
Antimicrobials or poor sampling can cause false-negative results

Overview

A lymph node culture looks for germs in fluid or tissue taken from a lymph node. Lymph nodes are small structures that help your immune system respond to infection.

The laboratory places the sample under conditions that allow certain germs to grow. These may include ordinary bacteria, fungi, or mycobacteria. Mycobacteria are a group of bacteria that includes the germ that causes tuberculosis.

A culture may identify the organism causing an infected or inflamed lymph node. For some organisms, the laboratory can also test which antimicrobial medicines are likely to work.

The culture is only one part of the assessment. Part of the sample may also be examined under a microscope by a pathologist. This separate examination can look for inflammation, cancer, or other changes that a culture cannot diagnose.

Why the test is ordered

A lymph node culture may be ordered when a lymph node stays enlarged, is unusually painful, forms an abscess, or has features suggesting a bacterial, fungal, or mycobacterial infection.

It may be especially useful when an infection has not improved as expected or when knowing the exact organism would change treatment. Your symptoms, travel, immune health, animal exposure, medicines, and previous infections help determine which cultures are needed.

Many enlarged lymph nodes do not need a culture. Nodes often enlarge temporarily during common viral illnesses, and viruses are not usually found using routine bacterial culture methods.

Who should have the test

This test is not used to screen people without a reason to suspect a lymph node infection. It may be considered if you have an unexplained or persistent enlarged node and the result could guide your care.

A culture may also be appropriate when imaging shows an abnormal node or a collection of fluid that can be sampled. People with weakened immune systems may need broader testing because they can develop infections from less common organisms.

Your healthcare team may choose a needle sample, a small core of tissue, or removal of part or all of a node. The best method depends on the node's size and location, the possible causes, and how much tissue is needed.

How to prepare

Preparation depends mainly on how the sample will be collected.

For a needle sample using local anesthetic, you usually do not need to fast. If you will receive sedation or general anesthesia, follow the instructions about when to stop eating and drinking. These instructions take priority over general advice.

Tell the team performing the procedure about:

Do not stop a prescribed medicine unless you have been given specific instructions. Antimicrobial medicines can reduce the chance of growing an organism, but stopping them without advice may be unsafe.

- Antibiotics like amoxicillin or doxycycline , antifungal medicines, or tuberculosis treatment
- Blood-thinning medicines and medicines that affect platelets

- Allergies to anesthetics, antiseptics, dressings, or latex
- Pregnancy or the possibility of pregnancy
- Bleeding problems or previous reactions to sedation

What happens during the test

The skin over the lymph node is cleaned. For a node close to the skin, local anesthetic is injected to numb the area. This can briefly sting.

A clinician may then use a thin needle to remove fluid or cells. A larger needle can collect a narrow core of tissue. Ultrasound or CT imaging may be used to guide the needle, especially when the node is small or deep.

Sometimes a surgeon removes part or all of the lymph node through a small incision. This is called an incisional or excisional biopsy. It may require local anesthetic, sedation, or general anesthesia.

The sample intended for culture is placed in a sterile container and sent promptly to the microbiology laboratory. Tissue needed for culture must not be placed in formalin, a preservative used for pathology samples, because formalin kills organisms.

Understanding your results

Culture results are not reported as a universal numerical range. Interpretation varies by laboratory, the organism being sought, your age, sex, pregnancy status, medicines, immune health, and clinical context.

A positive culture means an organism grew from the sample. The report may name the organism and describe whether it is likely to cause disease. Some results include susceptibility testing, which checks which medicines can stop the organism growing in the laboratory.

Not every organism found is necessarily the cause. Bacteria from the skin or environment can accidentally enter a sample. The type of organism, amount of growth, collection method, and microscope findings help distinguish infection from contamination.

A negative culture , often reported as "no growth," means the laboratory did not grow the organisms being tested for. It does not completely rule out infection. Some germs are difficult to grow, may be present only in small numbers, or require a different test.

Bacterial cultures may provide early information within days. Fungal and mycobacterial cultures often take longer because these organisms can grow slowly. Preliminary and final

reports may arrive at different times.

What affects the results

Several factors can produce a negative or misleading result even when the laboratory performed the test correctly.

Antibiotics, antifungal medicines, or tuberculosis treatment taken before sampling can stop organisms from growing. Tell your healthcare team what you have taken and when, but do not stop treatment on your own.

A small sample may miss the infected part of a lymph node. Organisms may not be spread evenly through the tissue, particularly when there are areas of dead tissue or separate pockets of fluid.

Handling also matters. Delayed transport, drying, use of the wrong container, or placing the whole sample in formalin can prevent growth. The laboratory may need advance notice when tuberculosis, fungi, or other unusual organisms are suspected so it can use the correct methods.

Skin organisms can enter the sample during collection and create a false-positive result. Careful skin cleaning lowers this risk but cannot remove it completely.

Unlike many blood tests, food, coffee, exercise, and time of day do not directly change whether germs grow from lymph node tissue. Their main relevance is whether you need sedation or have procedure-specific instructions.

Accuracy and limitations

There is no single accuracy percentage for lymph node culture. Its ability to find an infection changes with the organism, sample size, collection method, previous treatment, and laboratory technique.

Culture can miss an infection when too few living organisms are collected or when medicines have already reduced their number. Some organisms do not grow well in standard culture conditions. A negative result therefore needs to be considered alongside symptoms, imaging, blood tests, and tissue findings.

Culture can also say an organism is present when it is not causing the lymph node problem. This most often happens through contamination from skin or the environment.

Other tests may be better for particular questions. Stains can show organisms quickly under a

microscope but may miss small numbers. Molecular tests, such as nucleic acid amplification tests, can detect genetic material faster than culture for some infections. However, they may not provide full information about which medicines will work.

If cancer or another non-infectious condition is possible, examination of the tissue by a pathologist is more important than culture. A culture does not diagnose or exclude lymphoma or other cancers.

Risks and complications

A needle sample can cause brief pain, a small bruise, minor bleeding, or light-headedness. Infection at the puncture site is uncommon.

A surgical biopsy has additional risks from the incision and anesthesia. These can include bleeding, wound infection, scarring, or injury to a nearby nerve or structure. The exact risks depend on where the lymph node is located and the type of anesthesia used.

Follow the wound-care and activity instructions you receive. Contact the procedure team promptly for increasing redness, warmth, swelling, drainage, fever, or pain that is getting worse rather than better.

Seek emergency care for trouble breathing, rapidly increasing neck swelling, severe bleeding that does not stop with firm pressure, or collapse after the procedure.

What happens next

Your healthcare team may review early results first and update you when the culture is final. Routine follow-up may include discussing whether the organism fits your symptoms and whether treatment needs to start, continue, stop, or change.

If the culture is negative, the next step depends on why the node was sampled. Pathology findings, imaging, or a molecular test may provide the answer. Sometimes another sample is needed if the first one was too small or was collected after antimicrobial treatment.

Do not change prescribed antibiotics or other medicines based only on a laboratory result you have viewed online. The organism's significance and the appropriate treatment depend on the full clinical picture.

Common questions

Can I drink coffee before a lymph node culture?

Usually yes if only local anesthetic is planned. Do not drink coffee if your fasting instructions for sedation or general anesthesia say to avoid it.

Does the time of day matter?

No. The time of day does not meaningfully affect the culture. Appointment timing is based on the procedure and laboratory arrangements.

Can I exercise beforehand?

Light activity does not change the culture result. If you are having sedation or a surgical biopsy, follow the procedure team's activity instructions and arrange transport if required.

Will antibiotics affect the result?

Yes. Antibiotics can prevent bacteria from growing and cause a negative culture. Tell your healthcare team about recent treatment, but do not stop antibiotics unless instructed.

Why are my results taking several weeks?

Fungi and mycobacteria can grow slowly. The laboratory may keep the sample longer before issuing a final negative result.

Does a negative culture rule out infection?

No. The sample may not contain enough living organisms, or the organism may require a molecular test, special culture method, or examination under a microscope.

Sources

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