CONDITION

Abscess

Learn how abscesses form, what symptoms they cause, when to seek medical care, and how drainage, antibiotics, and wound care may be used.

WHAT IT IS
Pocket of pus formed around infection or foreign material

BODY SYSTEM
Skin and internal organs

MAIN SYMPTOMS
Painful swollen lump, warmth or redness, pus drainage, fever

WHAT CAUSES IT
Usually bacterial infection, sometimes foreign material

HOW IT IS DIAGNOSED
Physical examination and ultrasound, CT or MRI

MAIN TREATMENT
Drainage, antibiotics and wound care

CAN IT BE CURED?
Yes, with proper drainage and treatment

IS IT AN EMERGENCY?
Sometimes, with confusion, breathing difficulty or airway swelling

LONG-TERM OUTLOOK
Most properly treated skin abscesses heal without lasting problems

Overview

An abscess is a pocket of pus that forms when the body tries to contain an infection or, less often, a reaction to a foreign material. Pus contains fluid, immune cells, damaged tissue, and sometimes bacteria.

Abscesses can develop almost anywhere. A skin abscess appears beneath or within the skin and may be called a boil when it starts around a hair follicle. Abscesses can also form around a tooth, near the anus, in the breast, or inside the abdomen, chest, brain, or another organ.

A walled-off pocket of infection can be difficult for the immune system and antibiotics like amoxicillin or doxycycline to reach. For this reason, many abscesses need to be opened and drained. The right treatment depends on the abscess's location, size, cause, and effect on the rest of the body.

A small skin abscess may remain local, but an untreated abscess can enlarge, damage nearby tissue, or allow infection to spread. Deep or internal abscesses may not cause an obvious lump, so ongoing pain, fever, or illness sometimes requires imaging and medical evaluation.

Symptoms

A skin abscess often begins as a tender, swollen area. Common features include:

Redness may be harder to recognize on brown or black skin. Warmth, swelling, tenderness, and changes from the person's usual skin color can provide additional clues.

Symptoms of a deeper abscess depend on its location. An abdominal abscess may cause ongoing abdominal pain, fever, poor appetite, nausea, or a change in bowel function. A dental abscess can cause severe tooth pain, facial swelling, sensitivity to temperature, or a bad taste in the mouth. An abscess near the anus may cause constant pain that worsens with sitting or bowel movements.

Contact a healthcare professional promptly if a suspected abscess is painful, growing, draining, or not improving. Earlier assessment is also important for an abscess on the face, near an eye, around the anus or genitals, or over the spine. People with diabetes, poor circulation, or a weakened immune system should seek advice early because infection may progress with fewer obvious symptoms.

Seek urgent care for rapidly spreading redness or swelling, severe or worsening pain, a high fever, repeated vomiting, or marked weakness. Emergency care is appropriate for confusion, fainting, difficulty breathing, blue or mottled skin, or swelling of the face or mouth that makes it difficult to breathe or swallow. These symptoms can indicate a serious infection or a threatened airway.

- A painful lump that may feel warm, firm, or soft in the center
- Redness or a darker color than the surrounding skin
- Pus or cloudy fluid draining from an opening
- Increasing pressure or throbbing pain
- Fever, chills, or feeling unwell if the infection is more extensive

Causes and risk factors

Most skin abscesses result from bacteria entering through a small break in the skin or a blocked hair follicle. The opening may be too small to notice. Staphylococcus aureus is a

common cause. Some strains are resistant to several antibiotics and are known as methicillin-resistant Staphylococcus aureus , or MRSA.

An abscess can also develop after a puncture, injection, surgery, bite, or injury. A splinter, surgical material, or injected substance may trigger inflammation and provide a place for infection to develop. Rarely, a collection that looks like an abscess is caused mainly by inflammation rather than bacteria.

Internal abscesses may form after surgery, injury, or an infection within an organ. For example, leakage from the bowel following inflammation or perforation can lead to an abdominal abscess. A blocked gland may contribute to abscesses in the breast, groin, or genital area.

Factors that may increase the likelihood of an abscess or make one harder to heal include:

Repeated boil-like lumps in the armpits, groin, buttocks, or under the breasts may be related to hidradenitis suppurativa. This is a long-term inflammatory skin condition rather than simply a series of unrelated infections. Recurrent abscesses can also result from a cyst, foreign material, or a small abnormal passage called a fistula.

- Diabetes, especially when blood glucose is not well controlled
- A weakened immune system due to illness or immune-suppressing treatment
- Poor blood flow, chronic swelling, or reduced skin sensation
- Skin conditions that cause breaks, scratching, or blocked follicles
- Close contact with someone who has a draining skin infection
- Sharing razors, towels, needles, or other items that contact the skin
- A prior skin abscess or MRSA infection

Diagnosis

A healthcare professional can often identify a skin abscess by examining the area and asking how the symptoms developed. They may gently feel the lump to determine whether it contains fluid and look for surrounding cellulitis, which is infection and inflammation spreading through the skin.

An abscess is not always obvious from the surface. Ultrasound can show whether a painful lump contains fluid and can help distinguish an abscess from cellulitis or a solid mass. Computed tomography, commonly called a CT scan, or magnetic resonance imaging, known as MRI, may be needed when an abscess is deep, internal, or near important structures.

If the abscess is drained, a sample of pus may be sent to a laboratory. A culture can identify the

bacteria and help determine which antibiotics are likely to work. Culture is particularly useful for severe, recurrent, unusual, or treatment-resistant infections, although it is not required for every uncomplicated skin abscess.

Blood tests may be used when there are signs of a widespread infection or an internal abscess. Blood cultures check whether bacteria have entered the bloodstream.

Other testing depends on the location and possible cause. A recurrent abscess may lead to evaluation for diabetes, an immune problem, a retained foreign object, hidradenitis suppurativa, or a fistula. A lump that does not behave like an abscess may need further evaluation to rule out a cyst, inflamed lymph node, or another condition.

Treatment and management

Treatment focuses on removing the infected material, controlling any infection that has spread, and addressing the underlying cause.

For a small, superficial boil, a clinician may recommend warm, moist compresses and observation. Do not squeeze, pierce, or cut open a suspected abscess at home. Pressure can push infection into surrounding tissue, and attempting drainage can cause bleeding, injury, or incomplete treatment.

Many skin abscesses need incision and drainage. During this procedure, a clinician cleans the skin, numbs the area, makes a small opening, and allows the pus to drain. The cavity may be rinsed. Depending on its size and location, it may be left open, covered with a dressing, or temporarily packed with gauze so it can continue draining.

Drainage may relieve pressure quickly, but soreness and drainage can continue while the cavity heals from the inside outward. Packing is not necessary for every abscess. The clinician's choice depends on the wound and its location.

Antibiotics do not replace drainage when there is a substantial pocket of pus. They may be added when there is spreading cellulitis, fever or other whole-body symptoms, more than one abscess, a difficult location, or a higher risk of complications. They may also be considered when drainage is incomplete or the immune system is weakened. The choice is based on likely bacteria, local resistance patterns, allergies, culture results, and the person's medical history.

Deep or internal abscesses usually require hospital-based treatment. A radiologist may place a drainage tube through the skin using ultrasound or CT guidance. Some abscesses require surgery, especially when there is damaged tissue, bowel leakage, a fistula, or another source that must be repaired. Antibiotics are commonly part of treatment for internal abscesses.

Dental abscesses require dental treatment. Drainage, root canal treatment, or removal of the

affected tooth may be needed. Antibiotics alone do not remove the source inside a damaged tooth.

After drainage, wound care may include keeping the dressing clean and dry, washing hands before and after touching it, and changing the dressing as instructed. Towels, razors, clothing, or sports equipment that contacts drainage should not be shared. Follow the clinician's advice about bathing, work, exercise, and pain relief.

If antibiotics are prescribed, take them exactly as directed and contact the prescriber about significant side effects. Do not use leftover antibiotics or another person's medicine.

Complications

Most properly treated skin abscesses heal without lasting problems. Possible complications include scarring, recurrence, and spread of infection into nearby skin or deeper tissue.

An abscess can occasionally create a fistula, which is an abnormal channel between the infected area and the skin or another organ. Infection can also spread to bone, joints, or the bloodstream. A bloodstream response to infection may lead to sepsis, a life-threatening form of organ dysfunction that needs emergency treatment.

Internal abscesses can interfere with the function of the affected organ. They may rupture or cause ongoing infection if they are not fully drained or if the original source remains. These outcomes are not inevitable, but they explain why persistent or worsening symptoms need reassessment.

Follow up

Follow-up instructions depend on the abscess and how it was treated. A clinician may arrange a wound check within a few days, especially when packing or a drainage tube was placed. Keep this appointment even if pain has improved, because the opening can close before the deeper cavity has healed.

During routine healing, pain, swelling, and drainage should gradually decrease. A small amount of fluid on the dressing may be expected after drainage. Ask the treating team what is normal for the specific wound and when dressings or packing should be changed.

Contact the healthcare professional sooner if:

Seek urgent or emergency care for rapidly worsening illness, confusion, fainting, breathing difficulty, or swelling that affects swallowing or the airway.

Recurrent abscesses deserve a planned medical review rather than repeated home treatment. The clinician may look for a cyst, fistula, foreign material, hidradenitis suppurativa, diabetes, or another factor. Prevention may include treating an underlying skin condition, covering draining wounds, regular handwashing, and avoiding shared personal items. Some people with repeated S. aureus infections may be offered a clinician-supervised plan to reduce bacteria carried on the skin or in the nose.

- Pain, redness, warmth, or swelling is increasing
- Red streaks develop or pus continues to build up
- Fever begins or returns
- The wound has a strong odor or heavy bleeding
- Packing or a drainage tube falls out unexpectedly
- Symptoms fail to improve as expected
- A new abscess appears

Sources

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