CONDITION

Pica

Pica is persistent eating of non-food substances such as soil, paper, clay, or ice.

WHAT IT IS
Persistent eating of non-food, non-nutritive substances

BODY SYSTEM
Feeding, digestion, teeth, and whole-body health

MAIN SYMPTOMS
Eating non-food items, cravings, abdominal pain, dental damage

WHAT CAUSES IT
Often unknown; linked with deficiencies, pregnancy, or developmental conditions

HOW IT IS DIAGNOSED
Clinical assessment; tests check deficiencies, poisoning, and complications

MAIN TREATMENT
Cause treatment, safer surroundings, and behavioural support

CAN IT BE CURED?
Sometimes - resolves when underlying triggers are treated

IS IT AN EMERGENCY?
Sometimes - choking, poisoning, or severe abdominal pain

LONG-TERM OUTLOOK
Often improves; may persist with developmental conditions

Overview

Pica is a condition in which someone repeatedly eats substances that are not normally considered food and have no meaningful nutritional value. Examples include soil, clay, paper, chalk, soap, paint chips, or fabric. Repeatedly eating ice, called pagophagia , is also commonly described as pica.

Pica is classified as a feeding and eating disorder. It is sometimes called a pica-type eating disorder. For a diagnosis, the behaviour must generally continue for at least one month, be inappropriate for the person's stage of development, and not be part of an accepted cultural practice.

Young children often explore objects with their mouths. This is expected during early development and is not usually considered pica in children younger than 2.

Pica matters because some substances can damage the teeth or digestive system. Others may carry germs, parasites, lead, or toxic chemicals. The behaviour can also be a sign of iron deficiency or another health issue. Many people feel embarrassed about it, but honest information helps healthcare professionals arrange the right tests and support.

Symptoms

The main feature is repeatedly eating one or more non-food substances. A person may feel a strong urge or craving, but some people eat the substance automatically or because they like its texture, smell, or sensation.

Substances associated with pica include:

Symptoms caused by what was eaten may include constipation, nausea, abdominal pain, vomiting, damaged teeth, or mouth injuries. There may be no physical symptoms at first.

Signs of iron deficiency can occur alongside pica. These may include tiredness, weakness, headaches, shortness of breath during activity, or pale skin. These symptoms have many possible causes, so testing is needed rather than assuming iron deficiency is responsible.

- Soil, dirt, clay, sand, stones, or chalk
- Ice, paper, cardboard, fabric, string, or hair
- Soap, toothpaste, starch, ash, or cigarette remains
- Paint chips, plaster, metal, or other building materials

Causes and risk factors

There is no single cause of pica. In some people, no clear cause is found.

Pica is strongly associated with iron deficiency, with or without anaemia. Anaemia means there are not enough healthy red blood cells to carry oxygen around the body. Pica can also occur with other nutritional deficiencies, although the relationship is not always straightforward. Eating non-food substances may sometimes make a deficiency worse by replacing nutritious food or reducing nutrient absorption.

Pregnancy can trigger pica or make previous cravings return. This may be connected with iron deficiency, changes in taste and smell, stress, or several factors together. Pica does not mean that someone is pregnant, and most pregnant people do not develop it.

The condition is more common in people with intellectual disability, autism, or other

developmental conditions. Sensory needs, difficulty identifying edible objects, or learned behaviour may contribute. Pica can also occur alongside obsessive-compulsive disorder, schizophrenia, or severe stress, but it is not evidence of any one mental health condition.

Limited access to food and exposure to pica practices within a family or community may also play a role. Eating a substance as part of a culturally accepted practice is not, by itself, diagnosed as pica.

Diagnosis

There is no single blood test or scan that confirms pica. Diagnosis is based on a clinical assessment of what you eat, how often it happens, how long it has continued, and whether the behaviour is appropriate for your age and cultural setting.

A healthcare professional may ask about the amount eaten, where it comes from, and whether it contains paint, chemicals, soil, magnets, batteries, or sharp material. It is important to describe the behaviour as accurately as possible, even if it feels uncomfortable. This information helps identify specific risks rather than assign blame.

Blood tests may check for iron-deficiency anaemia. Depending on the substance and circumstances, testing may also include lead levels, electrolytes or other nutrients. Electrolytes are minerals, such as sodium and potassium, that help the body's cells work normally.

Further tests are chosen according to possible exposure and symptoms. For example, abdominal imaging may be needed after swallowing metal objects or if there are signs of a blockage. Tests for infection or parasites may be considered after eating contaminated soil or faeces. These tests look for causes and complications; they do not confirm pica itself.

The assessment may also consider pregnancy, developmental needs, mental health, food access, and medicines or health conditions that could affect nutrition.

Treatment and management

Treatment is tailored to the substance being eaten, the reason for the behaviour, and the person's support needs.

If testing finds iron or another nutritional deficiency, treating that deficiency may reduce or stop the cravings. Supplements should be based on professional advice and appropriate testing because taking more than needed can be harmful. Treatment may also address blood loss, dietary limitations, or another reason the deficiency developed.

Practical management focuses on reducing access to dangerous substances. This can mean safely removing paint chips, chemicals, batteries, magnets, soil, or other frequently eaten materials. Appropriate foods or safe sensory alternatives may sometimes help, particularly when texture or oral stimulation drives the behaviour.

Behavioural treatment can be useful, especially for people with developmental conditions. Approaches may include rewarding safer choices, teaching the difference between edible and non-edible objects, redirecting the behaviour, and changing routines or surroundings. Family members, carers, psychologists, occupational therapists, dietitians, and other professionals may be involved.

Mental health support may help when pica is connected with anxiety, compulsive behaviour, trauma, or another mental health condition. There is no medicine specifically approved to cure pica, although medicines may be used for a separate condition when appropriate.

During pregnancy, pica should be discussed with a maternity professional. They can assess nutrition and possible exposure to lead, parasites, or other harmful materials without treating the craving as a personal failing.

Complications

The risks depend mainly on what is eaten, how much is eaten, and how often.

Possible complications include:

Magnets and button batteries are especially dangerous if swallowed. Multiple magnets can attract each other through the bowel wall, while batteries can rapidly burn nearby tissue. Both require immediate medical assessment.

- Choking or an object becoming stuck
- Constipation, bowel blockage, or a compacted mass called a bezoar
- Tears or holes in the stomach or bowel from sharp objects
- Lead or chemical poisoning
- Infections or parasites from contaminated soil or faeces
- Broken teeth, worn enamel, or injuries inside the mouth
- Poor nutrition if non-food substances replace meals

Prevention

Pica cannot always be prevented. This is especially true when it is linked with pregnancy, developmental conditions, sensory needs, or an unexplained craving.

Early identification and treatment of nutritional deficiencies may prevent some episodes or reduce their severity. Routine supplements are not a substitute for testing and professional advice.

Keeping hazardous objects, chemicals, peeling paint, batteries, and magnets out of reach can lower the chance of poisoning or injury. Close supervision may be needed for someone who cannot reliably distinguish food from non-food items. These steps reduce risk but may not remove the underlying urge.

Living with it and what to expect

Pica may last for a short period or continue for years. When it is linked with iron deficiency or pregnancy, the behaviour often improves after the deficiency is corrected or the pregnancy ends, but this cannot be guaranteed.

Pica associated with autism, intellectual disability, or long-term sensory needs may persist. Management may then focus on preventing injury, building safer routines, and reducing how often the behaviour occurs. Progress can be gradual, and urges may return during stress or if a nutritional deficiency comes back.

Regular follow-up may include reviewing eating patterns, growth in children, dental health, blood results, and exposure risks. Most people can continue their usual activities, although extra planning may be needed at school, work, or in unfamiliar environments.

Pica is a health condition, not a sign of bad character or poor self-control. Reducing shame can make it easier to report new exposures and receive timely care.

When to get medical help

Arrange a routine medical appointment if you or someone you care for has repeatedly eaten non-food substances for a month or longer. An earlier appointment is appropriate during pregnancy, in a child, or when there are symptoms of anaemia, dental damage, constipation, or weight and growth concerns.

Seek urgent medical advice after possible exposure to lead, pesticides, cleaning products, large amounts of medication, or contaminated material. Contact your local poison information service if poisoning may have occurred. Do not cause vomiting unless a poison specialist specifically tells you to.

Get emergency help immediately for:

Do not wait for symptoms after a battery or magnet has been swallowed. Serious internal injury can begin before the person appears unwell.

- Choking, trouble breathing, collapse, a seizure, or severe confusion
- Severe or worsening abdominal pain, repeated vomiting, or marked swelling
- Blood in vomit or stool
- Inability to pass stool or gas with abdominal pain
- Swallowing a button battery, one or more magnets, or a sharp object

Common questions

Why do I crave and chew ice?

Repeatedly craving or chewing ice is called pagophagia. It is often associated with iron deficiency, even when anaemia has not yet developed. A blood test can check for this. Ice chewing can also crack teeth or damage fillings.

Is pica always caused by low iron?

No. Iron deficiency is an important and treatable association, but pica can also be linked with pregnancy, developmental conditions, sensory needs, stress, learned behaviour, or other nutritional problems. Sometimes no cause is identified.

Does pica mean I have an eating disorder?

Pica is classified as a feeding and eating disorder, but it differs from conditions centred on body shape, weight, or calorie restriction. It can occur by itself or alongside another physical, developmental, or mental health condition.

Can pica go away on its own?

Sometimes. It may stop when an iron deficiency or another trigger is treated. In other cases, especially when developmental or sensory factors are involved, it can continue and require long-term support. Even if cravings have stopped before, they may return.

Is eating soil or clay safe if it is sold for eating?

Not necessarily. Soil and clay can contain lead, parasites, bacteria, pesticides, or other contaminants. They may also cause constipation or interfere with nutrient absorption. Packaging or traditional use does not guarantee safety.

How can I tell someone about pica without feeling embarrassed?

You can begin with a direct description, such as, "I have been craving and eating clay several times a week." Include what the substance is, where it comes from, how much you eat, and how long this has happened. Healthcare professionals need these details to check for exposure and complications, not to judge you.

Sources

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