CONDITION

Ichthyosis

Ichthyosis is a group of conditions that cause persistently dry, thick, scaly skin.

WHAT IT IS
Group of conditions causing persistently dry, thick, scaly skin

BODY SYSTEM
Skin

MAIN SYMPTOMS
Dryness, scaling, thickened skin, itching

WHAT CAUSES IT
Usually inherited gene changes; sometimes illness or medicines

HOW IT IS DIAGNOSED
Skin examination; sometimes biopsy or genetic testing

MAIN TREATMENT
Moisturisers, scale-removing treatments, and specialist retinoid medicines

CAN IT BE CURED?
Sometimes - acquired forms may improve after treating causes

IS IT AN EMERGENCY?
Sometimes - confusion or fainting from overheating

LONG-TERM OUTLOOK
Often lifelong but manageable; associated syndromes may be serious

Overview

Ichthyosis is the name for a group of conditions in which the skin becomes unusually dry, thick, or scaly. "Ichthyosis" comes from a Greek word for fish, referring to the scale-like appearance that some types cause.

Normally, skin cells form, mature, and shed in a controlled cycle. In ichthyosis, cells may be produced too quickly, shed too slowly, or fail to form a normal protective skin barrier. This allows moisture to escape and causes dead cells to build up.

There are many types. Most are inherited, meaning they are caused by a gene change passed through a family or arising for the first time in a child. Ichthyosis vulgaris is one of the milder inherited forms. Other inherited forms can be present at birth and may affect much more of the body.

Acquired ichthyosis begins later in life. It can sometimes be linked to another health condition or a medicine.

Ichthyosis mainly affects the skin, but some inherited syndromes also affect the eyes, ears, hair, nervous system, or other parts of the body. Finding the specific type can therefore help guide care and family planning.

Symptoms

Symptoms differ greatly between types. Some people have mild scaling on the legs, while others have thick scaling across most of the body.

Common features include:

The appearance of scale can differ with natural skin colour. Redness may look pink or red on lighter skin and purple, grey, or dark brown on darker skin. Scaling can also leave areas that look lighter or darker than the surrounding skin.

Inherited ichthyosis may be visible at birth or appear during infancy or childhood. Some babies are born inside a tight, shiny membrane called a collodion membrane. This membrane sheds during the first weeks of life, after which the underlying type becomes clearer.

Ichthyosis vulgaris often causes fine scaling on the lower legs and may spare the creases behind the knees and inside the elbows. It can occur with eczema, asthma, or allergies.

Symptoms often become more noticeable in cold, dry weather. Heat can also be difficult because thick scale may interfere with sweating.

- Very dry, rough, or flaky skin
- White, grey, brown, or dark scale
- Thickened skin, especially on the palms and soles
- Itching, tightness, or discomfort
- Painful cracks, often on the hands, feet, or around joints
- Redness or inflammation
- Reduced sweating and difficulty staying cool

Causes and risk factors

Inherited ichthyosis is caused by changes in genes involved in making and maintaining the skin barrier. The pattern of inheritance differs by type.

Some forms require a gene change from one parent, while others require a changed copy from both parents. X-linked ichthyosis mainly affects boys and men, although women can carry the gene change and occasionally have mild symptoms.

A child can also have ichthyosis without either parent showing symptoms. This may happen because both parents carry an altered gene or because a new genetic change occurred.

Acquired ichthyosis usually develops in adulthood. Possible associations include:

Having dry skin does not mean that you have ichthyosis. Ordinary dry skin is common and may be caused by weather, frequent washing, ageing, or irritating skin products.

- An underactive thyroid
- Kidney or liver problems
- Certain cancers, especially some blood cancers
- HIV infection
- Poor nutrition or difficulty absorbing nutrients
- Medicines that affect skin-cell growth or cholesterol processing

Diagnosis

A healthcare professional can often recognise ichthyosis by examining the skin and asking when the changes began. They may ask about symptoms in relatives, problems present at birth, medicines, and other health concerns.

Genetic testing may identify the exact inherited type. This can be helpful when symptoms are severe, several body systems are affected, or you want information about the chance of passing the condition to a child. A genetics professional can explain what a result does and does not show.

A small skin sample, called a biopsy, is sometimes examined under a microscope. It can support the diagnosis, although it may not separate all types.

If scaling first appears in adulthood, blood tests or other investigations may be used to look for an underlying cause. Testing is chosen according to your symptoms and health history rather than being the same for everyone.

Treatment and management

Treatment aims to add moisture, reduce excess scale, prevent cracking, and manage

complications. It controls symptoms but does not correct the gene change in inherited ichthyosis.

Regular skin care is the main treatment. This may include:

Moisturisers may need to be applied more than once a day. The best product is one that you can use regularly without unacceptable stinging, irritation, or greasiness.

Scale-removing products are called keratolytics. They may contain urea, lactic acid, other alpha-hydroxy acids, or salicylic acid. These ingredients soften and loosen thickened skin. Strong products can sting cracked skin, and some are not suitable for young children or large areas of the body without specialist advice.

Severe ichthyosis may be treated with retinoid medicines, such as acitretin or isotretinoin. These medicines are related to vitamin A and slow the production of skin cells. They require specialist supervision and regular monitoring. Retinoids can cause serious harm during pregnancy, so strict pregnancy-prevention measures are required when relevant.

Additional care may include treatment for infected cracks, eye lubrication when the eyelids do not close fully, or removal of scale blocking the ear canal. Physiotherapy can help if tight skin limits movement. Foot care may be useful when thickened soles make walking painful.

Mental health support can also be part of treatment. Visible scaling, daily skin care, discomfort, and other people's reactions can affect confidence, relationships, school, or work.

- Taking a bath or shower to soften scale
- Using a soap substitute or gentle, fragrance-free cleanser
- Applying moisturiser soon after washing, while the skin is still damp
- Using thicker creams or ointments when the skin is very dry
- Gently removing loosened scale without scrubbing or picking

Complications

Cracks in the skin can be painful and may allow bacteria to enter. Signs of infection include increasing redness or colour change, warmth, swelling, pus, worsening pain, or fever.

Some people cannot sweat normally. This raises the risk of overheating, especially during exercise, hot weather, fever, or work in warm environments. Early signs can include unusual tiredness, headache, dizziness, nausea, muscle cramps, or feeling very hot without sweating normally.

Thick scale may block the ear canals and reduce hearing. Tight skin around the eyes can pull

the eyelids outward, called ectropion, or prevent them from closing fully. This may dry and damage the surface of the eye.

Deep cracks and tight skin can limit movement. In severe congenital forms, children may also have feeding difficulties, poor growth, hair loss, or repeated infections. Some syndromic forms have complications outside the skin, based on the gene involved.

Prevention

Inherited ichthyosis cannot currently be prevented through skin care, diet, or lifestyle choices. Nothing a parent did during pregnancy causes the gene change.

Genetic counselling can explain inheritance and reproductive options, but it cannot predict every detail of how severely a future child would be affected.

There is no single way to prevent acquired ichthyosis. When it is caused by another health condition or medicine, treating or changing that cause may improve the skin. Medicines should not be stopped without advice from the professional who prescribed them.

Regular moisturising does not prevent inherited ichthyosis, but it can reduce dryness, cracking, and scale. Planning for hot weather and taking breaks during exercise can lower the risk of overheating.

Living with it and what to expect

Most inherited forms are lifelong. Their severity may change with age, climate, hormones, health, and how consistently treatment is used. Symptoms commonly worsen during cold, dry months and ease in warm, humid conditions.

Ichthyosis vulgaris may become less noticeable in adulthood, but dry or scaly skin can remain. Congenital forms are usually more persistent. Treatment often becomes part of a daily routine and may need adjusting when the weather, symptoms, or lifestyle changes.

Acquired ichthyosis may improve if its cause can be identified and treated. Improvement is not always immediate, and the skin may take time to return toward its usual state.

Most people with milder forms can take part in school, work, exercise, relationships, and family life. Severe or syndromic forms may require long-term care from dermatology and other specialist teams.

Practical adjustments can help. These may include carrying moisturiser, choosing soft clothing, using a humidifier in dry conditions, allowing time for skin care, and planning ways to cool down

safely. Schools and workplaces may be able to provide rest breaks, temperature adjustments, or private space for applying treatment.

When to get medical help

Arrange a routine appointment if you have persistent scaling that does not improve with ordinary moisturiser, especially if it started in adulthood. Follow-up is also appropriate if treatment is not controlling cracking, itching, pain, or sleep disruption.

Seek prompt medical advice if:

Call emergency services if overheating causes confusion, fainting, a seizure, severe weakness, or loss of consciousness. Move to a cooler place and begin cooling while help is being arranged.

A newborn with widespread tight, shiny, cracked, or peeling skin needs urgent hospital assessment. Babies with severe congenital ichthyosis can lose fluid and heat quickly and may need help with feeding, breathing, eye protection, and infection prevention.

- The skin becomes increasingly painful, warm, swollen, or produces pus
- You develop fever with signs of a skin infection
- Cracks are deep, bleeding, or stopping you from walking or using your hands
- Scale is affecting hearing
- Your eyelids do not close fully, or you develop eye pain or blurred vision
- You repeatedly become dizzy, sick, or unusually tired in warm conditions

Common questions

Is ichthyosis contagious?

No. You cannot catch ichthyosis through touch, shared clothing, swimming, or close contact. Scaling is caused by altered skin-cell growth or shedding, not by an infection.

Can ichthyosis go away?

Most inherited types do not go away completely, although symptoms can become milder or easier to manage. Acquired ichthyosis may improve when an underlying condition is treated or a responsible medicine is changed.

Why is my skin worse in winter?

Cold air usually holds less moisture, and indoor heating makes the environment drier. This increases water loss from a skin barrier that already has difficulty holding moisture. Thicker moisturisers and more frequent application may help during colder months.

Can I bathe or swim with ichthyosis?

Yes. Bathing can soften scale and help moisturisers work. Hot water and harsh cleansers may increase dryness. Chlorinated or salt water may sting cracked skin, so rinsing afterward and applying moisturiser can be helpful.

Is ichthyosis the same as eczema?

No. Both can cause dry, itchy skin, and some people have both conditions. Eczema usually involves more inflammation and itchy patches, while ichthyosis mainly affects skin formation and shedding.

Will my child inherit ichthyosis?

The chance depends on the exact type and its inheritance pattern. Some types can pass from one affected parent, while others occur when both parents carry a gene change. Genetic testing and counselling can provide information specific to a family.

Sources

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