CONDITION

# Milia

Milia are tiny, harmless cysts caused by keratin trapped beneath the skin.

**WHAT IT IS**
Tiny keratin-filled cysts just beneath the skin

**BODY SYSTEM**
Skin

**MAIN SYMPTOMS**
Tiny white bumps, firm texture, usually no pain

**WHAT CAUSES IT**
Keratin trapped beneath the skin

**HOW IT IS DIAGNOSED**
Skin examination, rarely a biopsy

**MAIN TREATMENT**
Observation or professional removal

**CAN IT BE CURED?**
Yes - often clears or can be removed

**IS IT AN EMERGENCY?**
No - milia are harmless skin cysts

**LONG-TERM OUTLOOK**
Benign; newborn milia usually clear, adult milia may persist

## Overview

Milia are tiny cysts that form just beneath the surface of the skin. A single cyst is called a milium. They contain keratin, a strong protein found in skin, hair, and nails.

Milia usually look like firm white, cream, or yellowish bumps. They are most common on the face, especially around the eyes, cheeks, nose, and forehead. They may also appear elsewhere on the body.

These cysts are harmless and are not contagious. They are not acne, even though they can resemble small whiteheads. Unlike acne, milia do not form from blocked pores filled with oil and bacteria.

Milia are especially common in newborn babies. They can also develop in children and adults. Newborn milia usually disappear without treatment. In adults, individual cysts may remain for

months or longer unless they clear naturally or are removed.

A new skin bump is not necessarily a milium. Other conditions can look similar, so an examination may be helpful if the diagnosis is unclear or the area is changing.

## Symptoms

The main sign is one or more small, raised bumps. Most are about the size of a pinhead, although some are slightly larger.

Typical features include:

Milia often develop in groups. In newborns, they commonly appear across the nose, cheeks, forehead, or chin. They may be present at birth or become noticeable soon afterward.

In adults, milia frequently develop around the eyelids and upper cheeks. They can also appear on the chest, genitals, or areas where the skin has been injured.

Milia do not usually become inflamed. A bump may become red, sore, or swollen if it is repeatedly squeezed, scratched, or otherwise irritated. These changes are more likely to reflect irritation or infection than uncomplicated milia.

A rare pattern called milia en plaque causes many milia to form within a raised, red patch of skin. Another uncommon pattern, multiple eruptive milia, causes groups of cysts to appear over several weeks or months. These patterns should be assessed because they may need different treatment.

- White, cream, or pale-yellow colour
- A smooth, dome-shaped surface
- A firm feeling beneath the skin
- Little or no itching, tenderness, or redness

## Causes and risk factors

Milia form when keratin becomes trapped in a tiny pocket beneath the outer layer of skin. They are not caused by poor hygiene, and they cannot spread from one person to another.

Primary milia form without a previous injury. They arise directly from structures in the skin, such as hair follicles. This is the usual type in newborns and in many adults.

Secondary milia develop after the skin has been damaged or has healed. Possible triggers include:

Secondary milia may appear weeks or months after the original skin problem. They can form within scars or healing areas.

In newborns, milia are related to normal skin development. They are different from neonatal acne, which tends to cause red bumps or pus-filled spots and usually appears later.

Rarely, widespread or unusual milia occur with an inherited skin condition. This is more likely when many cysts began early in life and other family members have similar skin findings.

- Burns or blistering skin conditions
- Repeated friction or other skin injury
- Surgical or cosmetic skin procedures
- Long-term sun damage
- Certain medicines or products that affect the skin

## Diagnosis

A healthcare professional can usually identify milia by examining the skin. No blood test or scan is normally needed.

The examination focuses on the size, colour, texture, and location of the bumps. A magnifying device called a dermatoscope may sometimes be used to see surface details more clearly.

Milia can resemble closed acne spots, small oil-gland growths, sweat-duct growths called syringomas, or molluscum contagiosum. Some skin cancers can also begin as a persistent pale bump, although they usually develop other features over time.

If the appearance is unusual or the diagnosis remains uncertain, a clinician may remove part or all of a bump for a biopsy. During a biopsy, tissue is examined under a microscope. This is not usually necessary for typical milia.

## Treatment and management

Milia do not need treatment unless they are persistent, bothersome, or causing concern about their appearance. Treatment is cosmetic in most cases.

Newborn milia should generally be left alone. They commonly clear as the skin matures, often within the first weeks or months of life. Creams, scrubbing, and squeezing do not make them disappear faster and may irritate a baby's skin.

In older children and adults, milia may also clear naturally. Gentle washing and ordinary skin

care are usually enough while waiting. Scrubbing or using harsh exfoliating products can cause redness without removing the cyst.

A professional can remove a milium by making a very small opening in its surface and carefully extracting the keratin. Because the cyst sits under an intact layer of skin, squeezing it like a pimple is unlikely to work. Home treatment with a needle can cause infection, bleeding, skin discolouration, or scarring.

For multiple or persistent milia, treatment options may include topical retinoids, which increase skin-cell turnover, or procedures such as curettage, freezing, electrosurgery, chemical treatment, or laser treatment. The choice is based on the number and location of the cysts, the cause, skin type, and the risk of scarring or pigment changes.

Treatment near the eyelid requires particular care. Removal may be handled by a dermatologist, an eye specialist, or another clinician experienced in treating this area.

Milia can return after successful removal, and new cysts may form elsewhere. This does not mean that treatment failed or that the condition has become dangerous.

## Complications

Milia themselves rarely cause medical complications. They do not normally damage the skin or affect general health.

The main risks come from attempts to remove them at home. Cutting, piercing, or forceful squeezing can lead to:

Changes in skin colour after irritation are more likely to be noticeable in darker skin tones and may take months to fade.

Secondary milia can sometimes be a sign of previous skin damage. Treating the cysts does not treat an active blistering condition, burn, or other underlying skin problem.

- Bleeding or infection
- A permanent scar
- Darker or lighter skin marks
- Injury to the eye when treating the eyelid

## Prevention

Primary milia, including the type seen in newborns, cannot reliably be prevented. They result

from the way keratin becomes trapped beneath the skin rather than from poor washing or another avoidable habit.

Secondary milia may not always be preventable either. Protecting the skin from avoidable burns, repeated friction, and unnecessary injury may reduce the chance of cysts forming during healing.

Use skin medicines and strong cosmetic treatments as directed. If milia repeatedly appear after a particular product or procedure, discuss whether an alternative would be suitable. There is no need to scrub the skin aggressively or wash more often.

Sun protection helps prevent general skin damage, although it cannot guarantee that milia will not develop. Avoiding attempts to squeeze existing cysts can prevent irritation and scarring, but it does not stop new milia from forming.

## Living with it and what to expect

Milia do not usually limit daily activities. They are painless, do not spread to other people, and do not require changes at school, work, or home.

Newborn milia usually fade as the baby's skin develops. They do not normally leave scars. Routine baby skin care can continue, without special creams or attempts to remove the bumps.

In adults, the course is less predictable. Some cysts disappear over several weeks or months, while others remain for years. New ones may appear after earlier cysts have cleared or been removed.

Milia do not usually grow continuously or turn into skin cancer. However, a bump assumed to be milia may sometimes be another condition. A persistent spot that changes in size, colour, shape, or surface should be examined rather than repeatedly treated at home.

If appearance is affecting confidence, professional removal is an option. It may take more than one appointment when there are many cysts, and minor redness or temporary colour changes can follow a procedure. No treatment can guarantee that milia will never return.

## When to get medical help

Arrange a routine appointment if the bumps are persistent, numerous, or causing distress. An assessment is also reasonable if you are unsure whether they are milia or want to discuss safe removal.

Seek routine medical advice when:

Prompt advice is appropriate if an attempted removal leads to increasing pain, warmth, redness, swelling, pus, or fever. These can be signs of infection.

Milia are not an emergency. Sudden swelling around the eyes, difficulty seeing, severe eye pain, trouble breathing, or rapid facial swelling is not typical of milia and requires urgent or emergency assessment.

- Milia develop repeatedly after skin injury or blistering
- Many bumps appear over a short period
- They form within a red or raised patch
- A child has widespread cysts or other unusual skin changes
- A bump bleeds, crusts, enlarges, or changes colour

## Common questions

Can I pop milia like a whitehead?

It is best not to. A milium is covered by a layer of skin, so squeezing usually does not release its contents. Force can damage the surrounding skin. A professional can make a controlled opening and remove the keratin more safely.

Do milia go away on their own?

They often do, especially in newborns. Adult milia may disappear over time, but some remain for months or years. Persistent cysts can be removed if they are bothersome.

Are milia caused by using too much moisturiser?

Not usually. Milia form when keratin becomes trapped beneath the skin. Some heavy or occlusive products may contribute in certain people, but they are not the only cause. Milia can develop even with simple skin care.

Are milia the same as acne?

No. Acne involves blocked hair follicles, skin oil, and sometimes inflammation. Milia are small cysts filled with keratin. Acne medicines may not remove an individual milium, although some retinoid treatments are used for groups of milia.

Can milia form on my eyelids?

Yes. The eyelids and skin around the eyes are common locations. Do not use needles, strong acids, or harsh exfoliants near the eye. If removal is wanted, it should be done by someone experienced with the eyelid area.

Do milia mean I have high cholesterol?

No. Milia are not a sign of high cholesterol. Cholesterol deposits around the eyelids, called xanthelasma, are usually flatter, softer, and more yellow than milia. An examination can distinguish between them.

## Sources

- Berk DR, Bayliss SJ. "Milia: A Review and Classification." Journal of the American Academy of Dermatology . 2008;59(6):1050-1063. DOI record
- DermNet New Zealand. Milium, milia
- Primary Care Dermatology Society. Milia
- Cleveland Clinic. Milia: What They Are and How to Treat Them