



## Molluscum Contagiosum (MC)

MC is a viral infection of the skin or occasionally of the mucous membranes. MC has no animal reservoir, infecting only humans, as did smallpox. About one in six young people are infected at some time with MC. The infection is most common in children aged one to ten years old. MC can affect any area of the skin but is most common on the body, arms, and legs. It is spread through direct contact or shared items such as clothing or towels.

The virus commonly spreads through skin-to-skin contact. This includes sexual contact or touching or scratching the bumps and then touching the skin. Handling objects that have the virus on them (fomites), such as a towel, can also result in infection. The virus can spread from one part of the body to another or to other people. The virus can be spread among children at day care or at school. Molluscum contagiosum is contagious until the bumps are gone-which, if untreated, may be up to 6 months or longer. The time from infection to the appearance of lesions ranges from 2 weeks to 6 months, with an average incubation period of 6 weeks.

### Diagnosis

Diagnosis is made on the clinical appearance of classic fleshy lesions; the virus cannot routinely be cultured. The diagnosis can be confirmed by excisional biopsy.

### Symptoms

Molluscum contagiosum lesions are flesh-colored, dome-shaped, and pearly in appearance. They are often 1–5 millimeters in diameter, with a dimpled center. They are generally not painful, but they may itch or become irritated. Picking or scratching the bumps may lead to further infection or scarring. In about 10% of the cases, eczema develops around the lesions. They may occasionally be complicated by secondary bacterial infections. In some cases the dimpled section may bleed once or twice.

The viral infection is limited to a localized area on the topmost layer of the epidermis. Once the virus containing head of the lesion has been destroyed, the infection is gone. The central waxy core contains the virus. In a process called autoinoculation, the virus may spread to neighboring skin areas. Children are particularly susceptible to auto-inoculation, and may have widespread clusters of lesions.

### Treatments

Individual molluscum lesions may go away on their own and are reported as lasting generally from 6 to 8 weeks, to 2 or 3 months. However via autoinoculation, the disease may propagate and so an outbreak generally lasts longer with mean durations variously reported as 8 months, to about 18 months and with a range of durations from 6 months to 5 years.

Treatment is often unnecessary depending on the location and number of lesions, and no single approach has been convincingly shown to be effective. Nonetheless, treatment may be sought after for the following reasons:

#### Molluscum lesions on an arm.

- Medical issues including:
- Bleeding
- Secondary infections
- Itching and discomfort
- Potential scarring
- Chronic keratoconjunctivitis
- Social reasons
- Cosmetic
- Embarrassment
- Fear of transmission to others
- Social exclusion

Many health professionals recommend treating bumps located in the genital area to prevent them from spreading. The virus lives only in the skin and once the growths are gone, the virus is gone and cannot be spread to others. Molluscum contagiosum is not like herpes viruses, which can remain dormant in the body for long periods and then reappear. Thus, when treatment has resulted in elimination of all bumps, the infection has been effectively cured and will not reappear unless the patient is reinfected. In practice, it may not be easy to see all of the molluscum contagiosum bumps. Even though they appear to be gone, there may be some that were overlooked. If this is the case, one may develop new bumps by autoinoculation, despite their apparent absence.

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## Cryotherapy

Cryotherapy involves killing infected cells by “freezing” them with a pressurized liquid spray, usually liquid nitrogen or nitrous oxide. The procedure is painful and can be performed by any health professional, including nurse practitioner or physician assistant. The infected cells will heal within 2-3 weeks.

Povidone-iodine

## Astringents

Astringent chemicals applied to the surface of molluscum lesions to destroy successive layers of the skin include trichloroacetic acid, podophyllin resin, potassium hydroxide.

## Tea tree oil

Another essential oil, tea tree oil is reported to at least reduce growth and spread of lesions when used in dilute form. Tea tree oil may cause contact dermatitis to those with sensitive skin, although less often in dilute form.

## Imiquimod

Doctors occasionally prescribe imiquimod, the optimum schedule for its use has yet to be established. Imiquimod is a form of immunotherapy. Immunotherapy triggers your immune system to fight the virus causing the skin growth. Imiquimod is applied 3 times per week, left on the skin for 6 to 10 hours, and washed off. A cure may last from 4 to 16 weeks. Small studies have indicated that it is successful about 80% of the time. Another dose regimen: apply imiquimod three times daily for 5 consecutive days each week. This is not FDA-approved treatment for molluscum contagiosum.

## Surgical Treatments

These include cryosurgery, in which liquid nitrogen is used to freeze and destroy lesions, as well as scraping them off with a curette. Application of liquid nitrogen may cause burning or stinging at the treated site, which may persist for a few minutes after the treatment. Scarring or loss of color can complicate both these treatments. With liquid nitrogen, a blister may form at the treatment site, but it will slough off in two to four weeks. It should be noted that cryosurgery and curette scraping are not painless procedures. They may also leave scars and/or permanent white (depigmented) marks.

## Laser

Pulsed dye laser therapy for molluscum contagiosum may be the treatment of choice for multiple lesions in a cooperative patient. The use of pulsed dye laser for the treatment of MC has been documented with excellent results. The therapy was well tolerated, without scars or pigment anomalies. The lesions resolved without scarring at 2 weeks. Studies show 96%–99% of the lesions resolved with one treatment. [25][26] The pulsed dye laser is quick and efficient, but its expense makes it less cost effective than other options. Also, not all dermatology offices have this 585 nm laser. It is important to remember that removal of the visible bumps does not cure the disease. The virus is in the skin and new bumps often appear over the course of a year until the body mounts an effective immune response to the virus. Thus any surgical treatment may require it to be repeated each time new crops of lesions appear.

## Prognosis

Most cases of molluscum will clear up naturally within two years (usually within nine months). So long as the skin growths are present, there is a possibility of transmitting the infection to another person. When the growths are gone, the possibility for spreading the infection is ended.

Unlike herpes viruses, which can remain inactive in the body for months or years before reappearing, molluscum contagiosum does not remain in the body when the growths are gone from the skin and will not reappear on their own. However, there is no permanent immunity to the virus, and it is possible to become infected again upon exposure to an infected person.