

# Erythrasma

Erythrasma is a chronic superficial bacterial infection of the skin, primarily caused by *Corynebacterium minutissimum*, a Gram-positive bacterium. The condition is often localized to intertriginous areas, such as skin folds, where moisture and friction create an ideal environment for bacterial growth. Although asymptomatic in many cases, erythrasma may lead to discomfort, including mild itching or burning, particularly in areas like the groin. It is more prevalent in warm, humid climates and among individuals with certain predisposing factors, such as poor hygiene, obesity, diabetes, advanced age, and immunocompromised states.

## Epidemiology and Risk Factors

Erythrasma is frequently observed in individuals living in tropical and subtropical climates, where high humidity exacerbates the conditions for bacterial proliferation. The infection primarily affects areas with skin folds that retain moisture, such as the groin, armpits, intergluteal fold, inframammary region, and periumbilical area. It is most commonly seen in adults, with a higher incidence in individuals who are obese, have type 2 diabetes, or possess immunodeficiencies. Although less common in children, the condition may occur in those with hygienic challenges or increased sweating.

## Clinical Presentation

Initially, erythrasma presents as well-defined, pink patches covered with fine scales, accompanied by wrinkling of the skin. These patches may be slightly itchy or burning, particularly in the groin region, but many patients are asymptomatic. As the infection progresses, the patches transition in color from pink to red and then to brown, becoming more scaly over time. There are two recognized clinical variants of erythrasma:

- **Interdigital Erythrasma:** This is the most common variant, typically affecting the feet, especially between the fourth and fifth toes (the little toe). It presents as fissuring and scaling of the toe web spaces, often without symptoms. This form is notably prevalent in individuals with diabetes mellitus type 2.
- **Generalized Erythrasma:** This variant is seen most often in individuals with diabetes, particularly type 2 diabetes, where the infection extends beyond typical intertriginous areas and may involve the arms or abdomen.

## Diagnosis

The diagnosis of erythrasma is often clinical but can be confirmed using several diagnostic tools:

- **Wood's Lamp Examination:** This non-invasive diagnostic tool utilizes ultraviolet light to examine the skin. When the affected area is illuminated by the Wood's lamp, erythrasma

exhibits a characteristic bright coral-red fluorescence, which aids in distinguishing it from other dermatological conditions with similar presentations.

- **Microscopic Examination and Culture:** A skin scraping from the affected area can be examined microscopically to identify *Corynebacterium minutissimum*. Culture may also be performed to confirm the presence of the causative bacterium, although it is less commonly needed when the diagnosis is clear from clinical and Wood's lamp findings.

## Treatment

Treatment of erythrasma is aimed at eradicating the bacterial infection and reducing symptoms. Management strategies may vary depending on the severity of the infection and the patient's overall health:

- **Topical Therapy:**
  - **Antibiotics:** Topical treatments, such as clindamycin (1%), erythromycin (2%), and miconazole (2%), are commonly prescribed to eliminate the bacterial infection. These agents are typically effective in resolving the infection when applied directly to the affected skin areas.
  - **Antiseptic Measures:** Regular use of antibacterial soaps can help reduce the bacterial load and keep the affected area clean and dry.
- **Oral Antibiotics:** In more severe or persistent cases, or when topical treatments are ineffective, oral antibiotics may be required. Erythromycin is the most commonly prescribed systemic antibiotic, as it targets *Corynebacterium minutissimum* effectively. In certain cases, alternative antibiotics like clarithromycin or tetracyclines may also be used.
- **Lifestyle and Preventative Measures:**
  - **Hygiene:** Maintaining good hygiene is essential, particularly in individuals with risk factors such as diabetes or obesity. Keeping the skin dry and avoiding excessive sweating can prevent further bacterial growth.
  - **Lifestyle Modifications:** For individuals with diabetes, blood sugar control is vital to prevent recurrent infections. Regular use of aluminum chloride topical solutions can help reduce sweating in areas prone to infection.

## Prognosis

The prognosis for erythrasma is generally excellent with appropriate treatment. Most cases resolve within 1-2 weeks of initiating therapy. However, patients with underlying risk factors, such as diabetes or obesity, may experience recurrence. Long-term management involves controlling risk factors and maintaining skin hygiene to minimize the likelihood of future infections.

## Conclusion

Erythrasma is a common yet often overlooked skin infection caused by *Corynebacterium minutissimum*, which predominantly affects individuals in warm, humid climates or those with

certain risk factors, including diabetes, obesity, and immunocompromised states. Diagnosis is primarily clinical, confirmed with a Wood's lamp examination. Effective treatment is available, with topical and oral antibiotics being the mainstay of management. Preventative measures, including good hygiene practices, can help reduce the risk of recurrence, especially in individuals with underlying conditions.

## References

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