



Consultant Dermatologist
Dr Chang Choong Chor explains
why it is crucial to treat bacterial
infections sooner rather than later.



Bacterial Infections

“**B**acterial skin infections constitute about 5-6% of skin disease cases treated in Malaysian public hospitals,” says Dr Chang Choong Chor, a Consultant Dermatologist at Hospital Kuala Lumpur. These infections occur when bacteria enter the skin via a break or defect in the skin barrier following scratching, picking, rubbing or injury.

“In most cases, the root of infection is *Staphylococcus aureus*, a bacterium that is present in the normal skin flora of up to a quarter of healthy individuals,” he explains. These bugs can be commonly found in the nostrils, armpits and groin. “Another common bacterium that causes skin infection is *Streptococcus pyogenes*.”

A cause for investigation

Although most people with bacterial skin infections are otherwise healthy, individuals with recurring or severe infections may require further investigation to identify other related conditions.

"Pre-existing skin barrier defects caused by skin injuries, ulcers, eczema and other types of skin infections like athlete's foot, cold sores and shingles, predispose individuals to bacterial skin infections."

"Other predisposing factors include diabetes, immunosuppressive drugs, immune deficiency states, liver dysfunction, kidney failure patients on dialysis and HIV infection."

The big four

The most common bacterial skin infections among Malaysians are impetigo, folliculitis, furuncles (boils) and cellulitis.

Impetigo is a superficial bacterial infection involving the epidermis – the outermost layer of the skin. "Often associated with children, impetigo usually appears as pustules, oozy, red patches or golden-crusted erosions," he says.

These commonly develop around the mouth and arms, and can also occur as a complication of eczema. "Ecthyma (another type of bacterial infection) causes skin ulcerations as the bacteria invade deeper into the skin."

Folliculitis occurs when the bacteria invade hair follicles. "It appears as tender, red spots or pustules at the openings of hair follicles, similar to pimples."

Folliculitis commonly occurs over hair-bearing skin or scalp, especially at areas of friction or covering from clothing. "It can be triggered by various factors like shaving, plucking and waxing of body hair, oil-based skin care products, topical medications, eg, tar or topical steroids, and systemic medications like steroids."

A **furuncle** or boil develops when bacterial folliculitis involves the deep layer of the skin, appearing as a tender, red nodule or swelling centred around a hair follicle.

"A group of furuncles forming a large swelling with multiple pus-discharging openings is called a carbuncle,"



he explains. "This is commonly seen in people with poorly controlled diabetes."

An abscess forms when pus pools in a cavity formed underneath the skin, resulting in a large, tender swelling.

Cellulitis occurs when the bacteria invade deep into the skin and spread along the dermis and subcutaneous fat. Cellulitis commonly occurs on the limbs – especially the legs and feet – and causes painful, red swelling.

"Should the bacterial invasion reach the skin's lymph system, painful, red swelling with a well-demarcated edge can be observed. This is called erysipelas."