

Scarlet Fever

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Scarlet fever is the result of infection by **group A streptococci** that elaborate any of the 3 pyrogenic (erythrogenic) exotoxins (A, B, or C).

It is now encountered less commonly and is less virulent than in the past.

The primary focus of infection is most commonly **pharyngitis**, but infection may be secondary to a wound or skin infection (**surgical scarlet fever**) or have some other focus.

The incubation period: 1-7 days.

The **onset** is acute and is characterized by fever, chills, vomiting, headache, and toxicity.

A generalized sunburn like, “**scarlatiniform**” exanthem soon becomes apparent accentuated in the axillae, groin, and neck and is characterized by punctate red macules or fine papules that blanch on pressure. Petechiae may be present, especially on the distal extremities. In some individuals, it may feel like coarse sandpaper (**goose-pimple or sand paper**). Areas of hyperpigmentation that do not blanch with pressure may appear in the deep creases, particularly in the antecubital fossae (i.e., **Pastia lines**). The cheeks appear flushed, with sparing of the area around the mouth (i.e., **circumoral pallor**). The pharynx is inflamed, and the tonsils are hyperemic and edematous and may be covered with a gray-white exudate. The tongue may be edematous and reddened initially, with a white coating through which

protrude red papillae (i.e., **white strawberry tongue**). After several days the white coat desquamates, leaving a red tongue studded with prominent papillae (i.e., **red strawberry tongue**, raspberry tongue). The palate and uvula may be reddened and covered with petechiae.

The exanthem and enanthem of scarlet fever tend to **parallel the fever** course, lasting 5 to 7 days in the untreated patient; early antibiotic treatment may mitigate the physical findings. Desquamation begins on the face in fine flakes toward the end of the first week and continues over the trunk, ultimately involving the hands and feet.

The exanthem of streptococcal scarlet fever is not diagnostic of a streptococcal infection; other organisms can cause a similar rash, including several toxigenic stains of *S. aureus* and *Arcanobacterium haemolyticum*.

Because of the difficulty in distinguishing the causative agent, when the cause of illness is uncertain it may be prudent to treat patients with scarlet fever with a **cephalosporin** or β -lactamase-resistant **penicillin** 10 days (erythromycin for allergics). Supportive treatment is needed. Scarlet fever must also be differentiated from other exanthematous diseases, including measles, rubella, human parvovirus disease, and other viral exanthems. Kawasaki syndrome should also be considered, especially in younger children.