

Actinomyces

Produced by:

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- ***Actinomyces*** is a genus of the Actinomycetia class of bacteria. They all are Gram-positive and facultatively anaerobic, growing best under anaerobic conditions.
- individual bacteria are rod-shaped, *Actinomyces* colonies form fungus-like branched networks of hyphae.
- *Actinomyces* species are occurring in soil and in the microbiota of animals, including the human microbiota. They are known for the important role they play in soil ecology; they produce a number of enzymes that help degrade organic plant material, lignin, and chitin.

Presence

- Certain species are commensal in the skin flora, oral flora, gut flora, and vaginal flora of humans and livestock.
- They are also known for causing diseases in humans and livestock,
- usually when they opportunistically gain access to the body's interior through wounds. As with other opportunistic infections, people with immunodeficiency are at higher risk.

Is *Actinomyces* part of normal flora?



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- *Actinomyces spp.* generally have low virulence and are part of the normal flora of the mouth, other sites in the gastrointestinal tract, and the female genital tract.

Types of actinomycosis

- *Actinomyces* most commonly infect areas around your mouth and face.
- actinomycosis affects your mouth, nose, neck or jaw. It's sometimes called "lumpy jaw."
- pulmonary actinomycosis affects your lungs or chest.
- Uterine or pelvic actinomycosis affects your pelvic area and reproductive organs.
- Abdominal actinomycosis affects your intestines or other abdominal organs.

symptoms of actinomycosis

- Fever.
- Weight loss.
- fluid-filled areas on your neck, jaw or face or in your mouth (cervicofacial infection).
- Pain when you chew or severe jaw tightness (infection in your mouth or jaw).
- Chest pain (lung infection).
- Abdominal pain (pelvic or abdominal infection).

Treatment

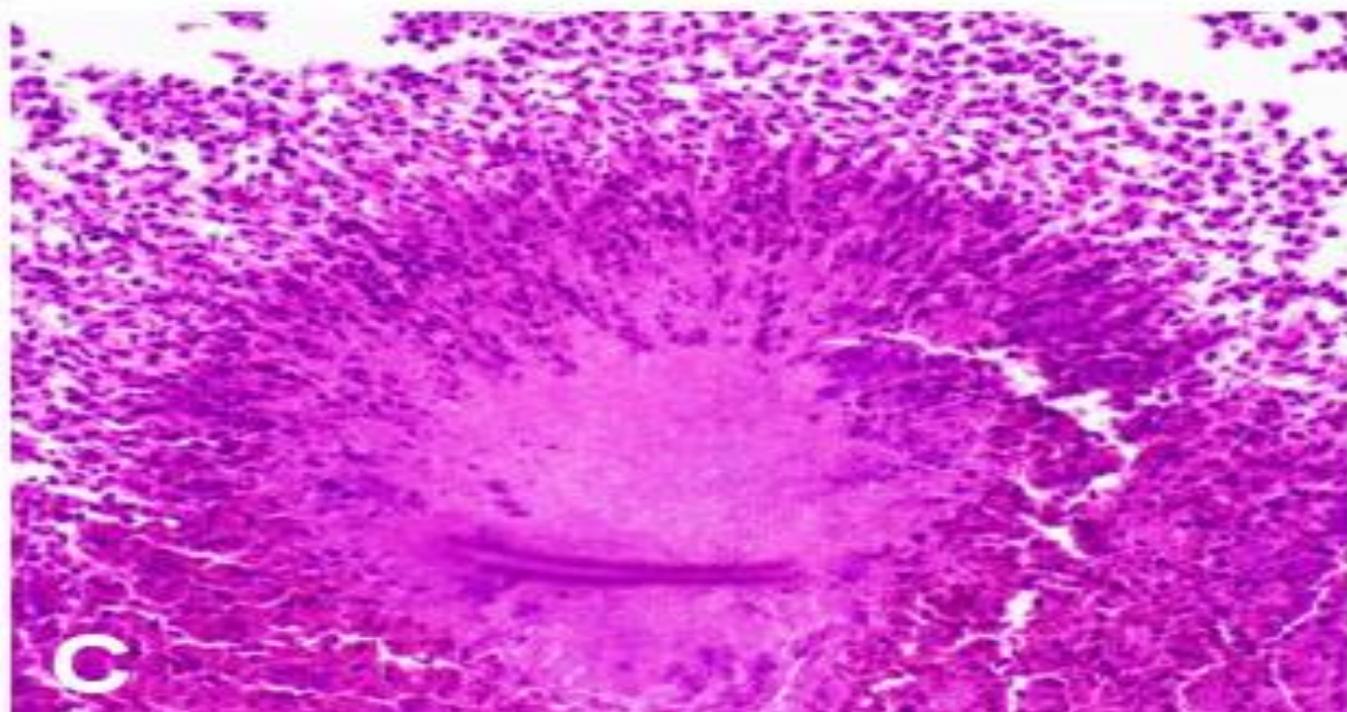
- Penicillin.
- Amoxicillin.
- Erythromycin.

What is the *Actinomyces* bacteria in teeth?

- *Actinomyces viscosus* is a gram-positive bacterium in the oral cavity that can attach to the tooth surface and ferment a variety of carbohydrates to produce acids..
- *Actinomyces israelii* can penetrate the normal mucosa only after other organism introduced into the mouth, intestine and surgery wounds. The most common infection is gingivitis, an inflammatory condition of the gums that affects the supporting structures of the teeth.



Figure 1: Intraoral examination revealing palatal perforation in the midline



What is Actinomyces in periodontal disease?

- Actinomyces spp. are located without displaying any pathogenic effect in the oral flora.
- However, the disruption of oral micro environmental balance, mucosal tissue integrity, and defense system can cause microorganisms to settle on deep periodontal tissues and to induce pathologic reactions.

A rustic, handcrafted card with a torn paper edge. The card is made of light brown cardboard and features the words "Thank you!" written in a black, cursive script. The card is placed on a piece of light-colored, textured fabric. To the right of the card is a single white daisy with a bright yellow center. In the background, two more daisies are visible, slightly out of focus. A dark, thin object, likely a vanilla bean, is positioned behind the card and extends to the left.

Thank
you!