



EUROPEAN ACADEMY OF
DERMATOLOGY AND VENEREOLOGY

Information Leaflet for Patients

CUTANEOUS INFECTIONS ON TATTOOS

The aim of this leaflet:

This leaflet is designed to help you understand more about infections of the tattooed skin after tattooing, what can cause them and what can be done to prevent them.

CUTANEOUS INFECTIONS ON TATTOOS

Why do tattoo infections occur?

While tattooing is a form of artistic expression, it causes temporary damage to the skin due to

- perforation of the skin by needles
- introduction of colorants into the skin
- damage of small blood vessels in the skin

There is a potential risk of introducing germs in the skin. Infectious skin complications on tattoos are diverse. In the majority of infections, they develop within days to a few weeks following the session.

What is the source of the infection?

Nowadays, an infection occurs only if proper rules of hygiene are not respected during the tattoo session and the healing period.

Possible sources are the premises, the materials, the tattooist, and the person receiving the tattoo.

For example:

- contaminated inks, needles, or other materials
- absence of proper disinfection
- session carried out outside a “professional” studio
- lack of good aftercare

Despite claiming sterility, some ink bottles may contain germs, even if still sealed. Contamination occurs mainly due to improper handling: mixing of inks with non-sterile water (tap water or unsterile distilled water), incorrectly closed or dirty vials, soiled needles, and incorrect hand hygiene.

More rarely, an infection may occur if a tattoo is performed on an infected skin area.

What germs can cause tattoo infections?

These infections can be caused by common germs such as pyogenic bacteria, but also by atypical environmental mycobacteria, viruses and rare fungal and parasitic infections can also occur.

Common bacterial infections on tattoos

Pyogenic infections include *Staphylococcus*, *Streptococcus*, and *Pseudomonas aeruginosa* infections among others. Local infection should be suspected in case of rapidly spreading local inflammation (pain, redness, local heat, pus), **pustules, boils and delay of healing. Fever or chills** may indicate that infection is spreading in the body (septicaemia). This is a rare situation, but it can be life-threatening and requires immediate medical attention.

In recent years, cases of **atypical mycobacteria** (also called **rapidly growing mycobacterial** or **environmental mycobacteria**) on tattoos have been on the rise.

These infections may occur as outbreaks, with similar skin symptoms in several clients in the tattoo parlor over a given period of time. This diagnosis would be made in the case of a rash restricted to one color, usually gray wash, appearing days to weeks after tattooing. The culprit is the use of non-sterile water to dilute black ink.

Rare infections on tattoos

Various rare infections have been reported on tattoos.

Warts and molluscum contagiosum

distributed on recent tattoos have been observed from weeks to months after tattoo completion. They are usually asymptomatic but esthetically unpleasant. They are most likely related to preexisting lesions that are not visible to the naked eye. Treatment has to be discussed on a case-by-case basis. Liquid nitrogen cryotherapy or curettage of warts/molluscae can be offered. Patients may also choose to wait, as spontaneous healing is possible.

Dermatophytosis (or tinea or ringworm)

on tattoos is unusual but has been documented. It will develop during the healing phase after tattooing. The contamination source is usually the patient's pet or a member of the family at home, who also harbors the infection. Accidental self-infection from another part of the body (like the foot or nails) is also possible. Diagnosis can be delayed when local corticosteroids have been applied based on the wrong diagnosis of a tattoo allergy. Fungal sample by scraping scales from the rash will correct the diagnosis and adequate local or oral fungal treatment is efficient.

Additional rare bacterial or fungal infections (such as tuberculosis, leprosy or rare fungal infections) have been reported in the past in anecdotal cases. They all have in common contracting an infection during tattooing or during the healing phase due to lack of proper tattoo aftercare.

How to prevent cutaneous infections on tattoos?

- Get a tattoo done by a professional tattoo artist in a registered tattoo parlor
- Avoid home or garage tattooing ("scratching"), even if performed by a "professional"
- Chose a tattooist trained for hygiene and proper disinfecting techniques according to national regulations.
- Read the official guidelines entitles "Tattooing. Safe and hygienic practice that has been published in January 2020. This document is an example of good practice. It specifies hygiene requirements before and during tattooing and for aftercare. It gives guidelines for tattooists and their routine interactions with clients and public authorities. It gives guidelines for the correct procedures to be used to ensure optimum protection of the client, the tattooist, and others in the tattoo work area.
- Follow the aftercare procedure and respect the advices, as given by the tattooist
- Do not get a tattoo if you are under immunosuppressive treatment (corticosteroids, systemic treatment, biologics) without supervision your treating physician.
- Consult your GP or your dermatologist in case of unusual reaction after tattooing.