

**EFFECT OF TATTOOING ON BLOOD DONATION**

**A SEMINAR PRESENTATION**

**BY**

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# SUMMARY

A tattoo is a form of body modification where a design is made by inserting ink, dyes and pigment either indelible or temporary into the dermis layer of the skin to change the pigment. Tattooing involves the placement of pigment into the skin's dermis, the layer of dermal tissue underlying the epidermis. After initial injection, the presence of this pigment which are foreign materials activates the immune system's phagocytes to engulf the pigment particles. Tattooing carries health risks including infection and allergic reaction. Infections that can theoretically be transmitted by the use of unsterilized tattoo equipment or contaminated ink include surface infections to the skin, fungal infections, some forms of hepatitis such as hepatitis B virus, herpes simplex virus, HIV, staphylococcus, tetanus. It is sometime possible to remove tattoos fully or partially with laser treatments. People with tattoos weren't eligible for blood donation because of the risk of infections transmitted to them during the tattoo process due to the use of unsterilized needles and contaminated ink. Recently one can donate blood if the tattoo was applied by a state Regulated entity using sterile needles and ink that is not reused and have to wait for a period of 6-12months after being tattooed. This is to allow time for the body to produce sufficient antibodies for a number of infectious diseases, such as HIV, hepatitis B and C and allowing infected blood to be accurately tested and discarded before being transfused to a recipient.

# INTRODUCTION

A tattoo is a form of body modification where a design is made by inserting ink, dyes and pigments, either indelible or temporary, into the dermis layer of the skin to change the pigment. The art of making tattoos is tattooing.

Tattoos fall into three broad categories:

- Purely decorative (with no specific meaning)
- Symbolic (with a specific meaning pertinent to the wearer)
- Pictorial tattoos ( a depiction of a specific person or item).

In addition, tattoos can be used for identification such as ear tattoos on livestock as a form of branding.

# HISTORY OF TATTOO AND WHO DISCOVERED IT

The word tattoos, or tattow in the 18<sup>th</sup> century, is a loanword from the samoan word tattau, meaning to strike. Tattoo date back many thousands of years. There is firm evidence that tattooing is an ancient art, after discoveries of tattoos in mummified skin were found. The oldest evidence of human tattoos is believed to be from between 3370 BC and 3100BC. Otzi the ICEMAN was discovered in September 1991. OTZI body has a total of 61 tattoos in various different locations, with the majority of these ink inscriptions located on his legs.

# TYPES OF TATTOO

- **PROFESSIONAL TATTOOS**, both via traditional methods and modern tattoos machines.



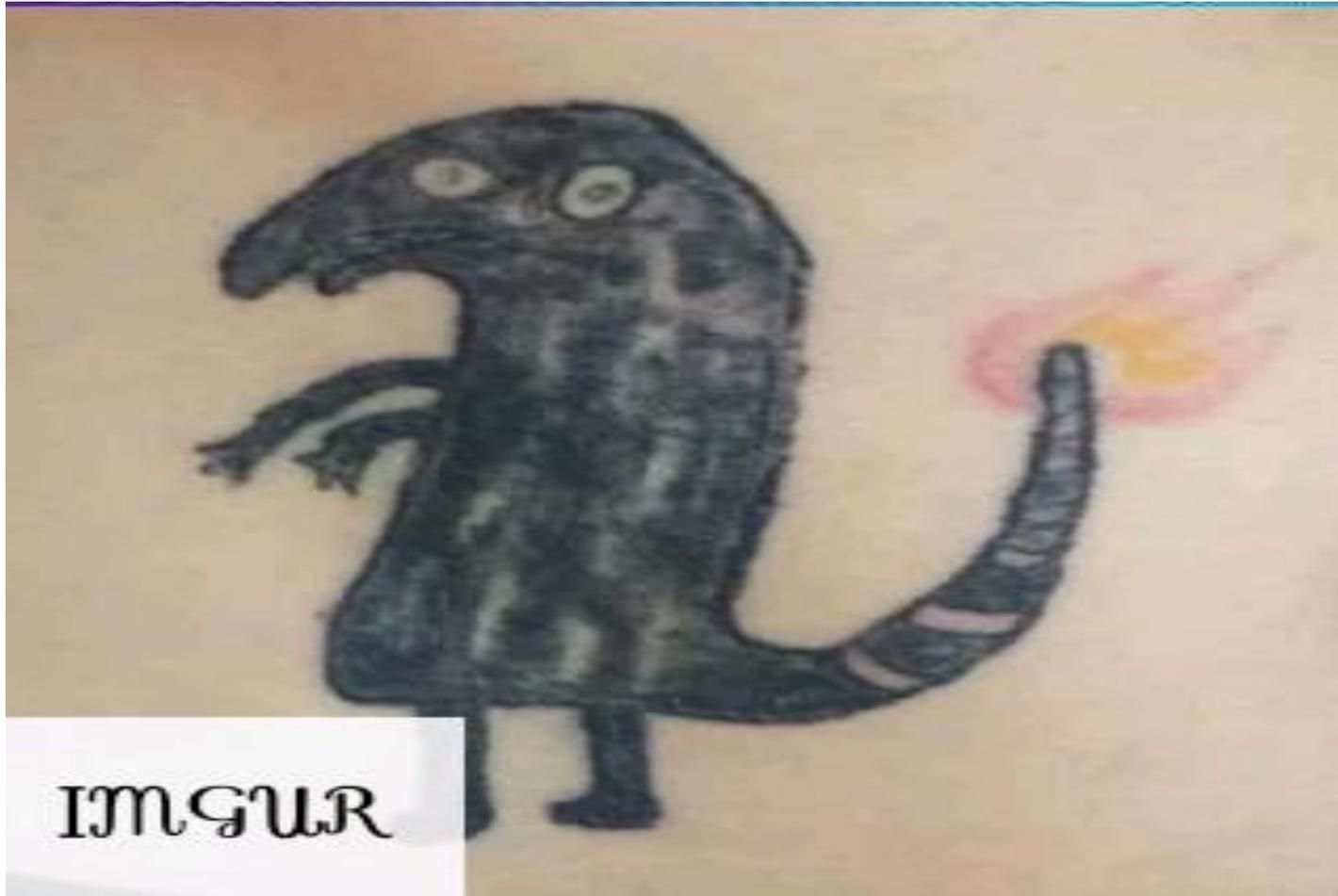
- **TRAUMATIC TATTOOS:** also called “natural tattoos”, that result from injuries, especially asphalt from road injuries or pencil lead.



•**COSMETIC TATTOO:** also known as “permanent makeup” is the use of tattoos to enhance eyebrows, lips ( liner and /or lipstick), eyes (liner) and even moles, usually with natural colors as the design are intended to resemble makeup.



- **AMATEUR TATTOOS** : can be applied by just anybody using a needle and a bottle of ink.



• **MEDICAL TATTOOS:** are used to convey medical information about the wearer ( e.g. blood group, medical condition, etc). additionally, tattoos are used in skin tones to cover vitiligo, a skin pigmentation disorder.



# **PROCESS OF TATTOOING AND TATTOO INK**

The most common method of tattooing in modern times is the electric tattoo machine, which inserts ink into the skin via a single needle or group of needles that are soldered onto a bar, which is attached to an oscillating unit. The unit rapidly and repeatedly drives the needle in and out of the skin, usually 80 to 150 times a second, the needles are single-use needles that come packaged individually.

# TATTOO INKS

Tattoo inks have been described as “remarkably nonreactive histological”. However, cases of allergic reactions to tattoo ink, particularly certain colors have been medically documented. This is sometimes due to the presence of nickel in an ink pigment, which triggers a common metal allergy.



# HEALTH RISK/EFFECTS OF TATTOOS

Tattooing is regulated in many countries because of the associated health risk to client and practitioner, specifically local infection and virus transmission. Because it requires breaking the skin barrier, tattooing carries health risks including infection and allergic reaction. Modern tattooists reduce risks by following universal precautions working with single-use items and sterilizing their equipment after each use. Infections that can theoretically be transmitted by the use of unsterilized tattoo equipment or contaminated ink include surface infections to the skin, fungal infections, some forms of hepatitis HIV, staphylococcus and tetanus.

# TATTOO REMOVAL

While tattoos are considered permanent, it is sometimes possible to remove them, fully or partially with laser treatment. The expense and pain associated with removing tattoos are typically greater than the expense and pain associated with applying them.

# TATTOO LOCATIONS

- Body suit (tattoo)
- Genital tattooing
- Lower back tattoo
- Sclera tattooing

# TATTOOING IN BLOOD DONATION

For a long time there was a restriction where people with tattoos weren't eligible for blood donation because of the risk of infections transmitted to them during the tattoo process. Having a tattoo does not automatically disqualify prospective blood donors. A tattoo is acceptable if the tattoo was applied by a state-regulated entity using sterile needles and ink that is not reused. One cannot donate blood till 6-12 months after being tattooed.

# TATTOOING IN BLOOD DONATION CONT'D

This is because blood donated by such people carries the risk of being infected as it involves the use of needles. This is just an infection control measure.

- Tattoo donors, although are allowed to donate blood after 6-12 months of having tattoo, they are usually not preferred and those without will be preferred.
- Having a tattoo also goes to say something about the person, usually such people are also drug addicts or share needles with addicts, or are from bad company and could harbor dangerous pathogens. So, taking blood from such donors will kill the recipient than to save.

# TATTOOING IN BLOOD DONATION CONT'D

- Those having tattoos are of a greater risk to infections and viral diseases such as hepatitis B, hepatitis C and HIV and AIDS virus.
- Twelve weeks allows time for the body to produce sufficient antibodies for a number of infectious diseases such as HIV, Hepatitis B, hepatitis C etc allowing infected blood to be accurately tested and discarded before being transfused to a recipient.

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