

# Tattooing linked to higher risk of hepatitis C: study

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Youth, prison inmates and individuals with multiple tattoos that cover large parts of their bodies are at higher risk of contracting hepatitis C and other blood-borne diseases, according to a University of British Columbia study.

The researchers reviewed and analysed 124 studies from 30 countries, including Canada, Iran, Italy, Brazil and the United States, and found the incidence of [hepatitis C](#) after tattooing is directly linked with the number of tattoos an individual receives. The findings are published in the current issue of the *International [Journal of Infectious Diseases](#)*.

Tattoos have become increasingly popular in recent years. In the U.S., an estimated 36 per cent of people under 30 have tattoos. In Canada, approximately eight per cent of high school students have at least one [tattoo](#) and 21 per cent of those who don't have one want one. During tattooing, the skin is punctured 80 to 150 times a second in order to inject color pigments.

"Since tattoo instruments come in contact with blood and bodily fluids, infections may be transmitted if instruments are used on more than one person without being sterilized or without proper hygiene techniques," says lead author Dr. Siavash Jafari, a Community Medicine Resident in the UBC School of Population and Public Health (SPPH).

"Furthermore, tattoo dyes are not kept in sterile containers and may play a carrier role in transmitting infections," says Jafari. "Clients and the

general public need to be educated on the risks associated with tattooing, and tattoo artists need to discuss harms with clients."

Other risks of tattooing identified by the study include allergic reactions, HIV, [hepatitis B](#), bacterial or fungal infections, and other risks associated with tattoo removal.

The researchers are calling for infection-control guidelines for tattoo artists and clients, and enforcement of these guidelines through inspections, reporting of adverse events and record-keeping. They also recommend prevention programs that focus on youth - the population who are most likely to get tattoos - and prisoners - who face a higher prevalence of hepatitis C - to lower the spread of hepatitis infection. In Canada, 12 to 25 per cent of hepatitis C infections among prisoners are associated with tattooed individuals, compared to six per cent of the general population.

The chemical ingredients in tattoo dyes can include house paint, ink from computer printers, or industrial carbon. Toxic contents of some tattoo inks may be entering the kidney, lungs and lymph nodes through the circulatory system. The study also revealed a new trend among youth to get tattooed with glow-in-the-dark ink, the risks of which are not yet known.

Provided by University of British Columbia

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