Tattooing Significantly Increases the Risk of Contracting Hep C

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Getting a tattoo can increase a person's risk for contracting hepatitis C virus (HCV) by nearly six times, according to a study published online July 31 in the *International Journal of Infectious Diseases*.

The prevalence of tattoos in the United States has skyrocketed in the past few decades. Experts estimate that more than a third of adults younger than 30 now have tattoos. What was once socially daring has become commonplace for some age groups.

Unfortunately, while tattooing may be more socially acceptable, it remains a serious health risk. Tattooing has been linked to an increased risk for a host of infectious diseases, including HCV, hepatitis B virus, HIV and methicillin-resistant Staphylococcus aureus (MRSA).

Different studies have demonstrated that the risk for acquiring HCV from tattooing varies depending on the population being studied and its baseline risk of HCV infection. For instance, while the prevalence of HCV infection is just over 2 percent in U.S. adults, it is more than 30 percent among prisoners, and nearly 90 percent among long-term intravenous drug users (IVDUs). Thus, it has been difficult to assess where the risks are greatest.

To help answer this question, Siavash Jafari, MD, from the British Columbia Centre for Disease Control in Vancouver, and his colleagues conducted a wide-scale analysis of published studies on the risk for HCV infection from tattooing. A total of 83 studies, including more than 134,000 participants around the globe, were included in the authors' meta-analysis. Populations studied varied from IVDUs to prisoners, blood donors and community samples.

Jafari found that the risk for acquiring HCV because of tattooing was actually greatest among non-IVDUs, where the risk for HCV infection was nearly six-fold higher among those with tattoos compared with those without tattoos. The next highest was among blood donors, with a nearly four-fold greater risk, followed by a nearly three-fold increased risk in IVDUs and prisoners. People were far more likely to acquire HCV from tattooing that occurred in non-professional tattoo parlors than in professional tattoo parlors.

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

While the studies that Jafari's team reviewed were mostly observational—meaning that they simply looked at what happened over time in a group of people—determining a person's increased risk of HCV with certainty isn't possible. There is the chance, therefore, that the study is over-estimating the risk of HCV from tattooing. The authors point out, however, that seven of the eight risk groups they included in their analysis had a profoundly increased risk from tattoos. What's more, people with larger tattoos or multiple tattoos were at a higher risk than people with only one tattoo of a smaller size. These factors increase the likelihood that the study has accurately characterized the increased risk from tattooing.

The authors state that, "When seeking tattooing services, clients should be advised to be alert to the use of equipment that has not been adequately sterilized or disinfected, [and the risk that] the tattoo artist does not follow proper infection control procedures (e.g. washing hands, using latex gloves, and cleaning and disinfecting surfaces and instruments)."

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

For guidelines to reduce the risk of the transmission of infectious diseases from tattooing, click here.
