

Could the Stanley Cup spread disease?

May 28 2019, by Matt Shipman

A lot of traditions have developed around the Stanley Cup since it was first awarded to hockey champions in 1893. One of those traditions is for members of the winning team to drink from the Cup, which raises the question: could the Stanley Cup spread disease?

To get at that question, we should discuss the history of the "common cup."

Shared Cups and Public Health

In the early years of train travel in the United States, travelers were expected to share a common cup, or a dipper, when getting water in their train cars. This eventually raised [public health](#) concerns, which led to a spate of state and federal laws barring the use of common cups in train travel.

"We now know that whenever someone places their hands or mouth on a cup, or other eating utensil, that person can deposit bacteria or viruses on the surface," says Ben Chapman, a food safety researcher at NC State University (and avid hockey fan). "The next person to use that utensil may then ingest the bacteria or virus.

"This form of cross-contamination is well established, and has been identified as a vector for disease since studies of diphtheria and tuberculosis in the early 20th century—which is what led to the common cup laws in the first place."

That's good general background, but what about the Stanley Cup in particular?

Drinking From Lord Stanley's Cup

The bowl part of the Cup, which is what people actually drink from, is made of silver—not dissimilar to a silver chalice your grandparents might own, if your grandparents own a silver chalice that's been photographed with Wayne Gretzky. And the fact that it's made of silver actually matters.

Silver is inert. That means it won't react chemically with most of the substances you put into it, like the acidic fruit juices. Silver also has antimicrobial properties. However, given the circumstances we're talking about (a bunch of hockey players drinking out of the Cup), those antimicrobial properties won't reduce the risk of cross-contamination in any meaningful way.

What About Booze?

Everyone knows [alcohol](#) is a disinfectant. But does the presence of alcohol eliminate the risk of disease transmission for people drinking out of the Cup? No.

"There are two big factors here," Chapman says. "One factor is the amount of alcohol in the beverage. For example, beer has a lower percentage of alcohol than champagne, which has less alcohol than hard liquor.

"An alcohol percentage of about 3% appears to be the threshold for making a difference in regard to contamination. And the higher the alcohol percentage, the more effective the beverage will be as an

antimicrobial agent."

However, this first factor is largely irrelevant, because of the second factor: time.

"In order to kill off pathogens, the alcohol has to be in contact with the pathogens for a specific period of time," Chapman says. "The higher the alcohol content, the shorter the contact time needs to be.

"But, as we've noted in the past with eggnog, even strong liquor won't significantly reduce microbial contamination in an hour or less. And nobody's waiting an hour between sips when it comes to the Stanley Cup."

What Increases Risk?

People have put all sorts of things into the Stanley Cup, from dogs to caviar. But the riskiest behavior comes when people put things in the Cup that are likely to be contaminated, such as raw eggs (that's happened) or babies that are about to poop (that's happened too).

Beyond that, basic health guidelines suggest that any time someone is drinking from the Cup, you want to make sure they've washed their hands first and haven't thrown up recently. Players who are playing through an illness, for example, could potentially pass it on to the rest of the team. (Players who barfed due solely to athletic exertion likely don't pose an increased health risk.)

What Is The Biggest Risk?

"If someone is going to contract a disease by drinking out of the Cup, my best guess would be norovirus," Chapman says. "There are more than

19 million cases of norovirus each year in the U.S., and it is incredibly hardy. In addition, it only takes a little bit to make you sick—on average only a few [virus particles](#) are necessary to cause an illness.

"If norovirus got onto the Cup, it could survive there for months. What's more, you have to take very specific steps to sanitize a surface contaminated with noro."

However, it's important to note that cross-contamination can only occur if one of the people handling the Cup is a disease carrier.

So, can drinking out of the Cup spread disease?

"Absolutely," Chapman says. "But it's really unlikely."

Provided by North Carolina State University

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