

Harvesters: keeping your hands clean

Dirty hands can contaminate produce with viruses that cause human illnesses, like hepatitis A and norovirus.

Prevention is the best control and good hand hygiene is critical to making berries safer.

- Wash your hands thoroughly with soap and clean water, especially after using the bathroom.
- Do **not** rely on alcohol-based hand sanitizers, they are not completely effective against foodborne viruses like norovirus and hepatitis A.



Berries are **at-risk foods** for viral contamination.

- They are hand-picked and these viruses spread easily with hand contact via the fecal-oral route (poop to mouth).
- Berries are generally not heated or cooked before being eaten so virus is not destroyed.
- The use of sanitizers, washing, and/or freezing berries is not effective for removing or destroying the virus.

Foodborne viruses

Noroviruses are the leading cause of foodborne illness.

- Norovirus (the “stomach flu”) causes nausea, vomiting, & diarrhea. There are over 5 million foodborne cases per year in the U.S. alone. Hepatitis A illness starts with flu-like symptoms and then progresses to jaundice (yellowing of the skin & eyes) and sometimes other complications.
- For both viruses, it is possible to be infected and not show symptoms; the sick person is also infectious for days to weeks before, during, and after illness, so keeping your hands clean is especially important. This is also important if you are taking care of someone who is ill.
- Norovirus infection is miserable but usually lasts a short time. Sometimes it is necessary to see a doctor because of dehydration. Hepatitis A infection is much more severe.



Outbreak Snapshots

Hepatitis A	Norovirus
In 2013, over 100 people in the Western U.S. became ill with hepatitis A infections after eating contaminated frozen berries (pomegranate seeds are likely the vehicle of contamination).	In 2012, over 11,000 children and teens in Germany were sickened by norovirus from contaminated frozen strawberries distributed to schools.
In early 2013, dozens were sickened in Europe over several months from frozen berries served in smoothies.	In a 2009 norovirus outbreak in Europe caused by raspberries, over half of those affected were children younger than 7 years of age.
A 2012 outbreak of hepatitis A in Canada was also linked to a frozen mixed berry blend.	In 2005, contaminated raspberries sickened more than 1000 people in Denmark, including people in hospitals and nursing homes.