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Hepatitis A Linked to Frozen Mangoes: Post-exposure Prophylaxis (PEP) Immunization Recommendations

Attention: Physicians, Emergency Departments, Nurse Practitioners, Infection Control Practitioners, Occupational Health Professionals, Walk-In Clinics/Urgent Care Clinics, Midwives, Family Health Teams, Child Care Centres, Pharmacies, Central LHIN, NSM LHIN, Long-term Care Homes, Retirement Homes

Date: August 4, 2021

Background

Three cases of hepatitis A in Quebec and Nova Scotia have been linked to frozen mangoes. These mangoes have been distributed widely in Ontario and were recalled by the Canadian Food Inspection Agency on July 31, 2021. The products recalled can be found at: <https://inspection.canada.ca/food-recall-warnings-and-allergy-alerts/2021-07-30/eng/1627691106085/1627691112044> . **As post-exposure prophylaxis, hepatitis A vaccination within 14 days of exposure to the recalled products is recommended for individuals 6 months of age and over unless contraindicated or fully immunized.**

Accessing Hepatitis A Vaccine

The Simcoe Muskoka District Health Unit (SMDHU) will be offering hepatitis A immunization for susceptible individuals as follows:

Barrie

Location: Holly Community Centre
171 Mapleton Avenue
Barrie, ON

Date: Wednesday August 4 – Saturday August 7, 2021

Time: 11:00am – 3:00pm

Huntsville

Location: Canada Summit Centre
20 Park Drive

Date: Friday August 6 – Saturday August 7, 2021

Time: 11:00am – 3:00pm

Appointments can be booked on the SMDHU website : www.simcoemuskokahealth.org

Publicly-funded hepatitis A vaccine can be ordered by health care providers through the Immunization Program (IP) by calling and leaving a message on our vaccine order line at 705-721-7520 ext. 8808. Please leave the following information:

View all Public Health Alert bulletins at the Health Professionals Portal

www.smdhu.org/HPPortal



Subscribe to urgent health email communications (E.g. Public Health Alert) by registering at www.smdhu.org/PHAlert

- Name of your facility
- The health unit office your vaccine orders will be picked up from
- Name of contact person for this order
- Phone number for the contact person if questions arise about this order
- The client's initials and date of birth for whom the vaccine is being ordered for

SMDHU will expedite these orders as quickly as possible.

Indications for post exposure prophylaxis (PEP) for large scale food recall response

Recommendation for post-exposure prophylaxis, if within 14 days of last exposure:

- Everyone 6 months of age and over should be offered hepatitis A vaccine as soon as possible (unless contraindicated, fully immunized in the past or already immune– see below for details).
- It is recommended that monovalent vaccine be used over combined Hep A/B vaccine (Twinrix) as it has a more robust immune response required for PEP efficacy.
- Only one dose of hepatitis A vaccine is indicated for PEP. A second dose is indicated for long term protection and **would not** be publicly-funded.

Age group OR underlying condition	Post-exposure prophylaxis (PEP)	Comments
Less than 6 months of age	No post-exposure prophylaxis. Immune globulin is generally not recommended, but can be considered in infants at high risk for liver complications (ex. severe liver disease)	Hepatitis A vaccine is not authorized for children less than six months of age. Pay careful attention to hygiene when diapering to prevent fecal oral spread.
6 months to less than 12 months of age (who are not immunocompromised and do not have chronic liver disease)	Hepatitis A vaccine	NACI's evidence review found that vaccination of infants 6 to 12 months of age with inactivated hepatitis A vaccines is immunogenic and safe. For this age group, use of the hepatitis A vaccine is considered off-label.
12 months and over (who are not immunocompromised and do not have chronic liver disease)	Hepatitis A vaccine	If immunocompromised or have chronic liver disease, see appropriate row below. Given the level of risk in this particular type of exposure, hepatitis A vaccine is felt to be sufficient for those 50 years of age and over.
Pregnant or breastfeeding women	Hepatitis A vaccine	The vaccine has not been studied in clinical trials, but because the vaccine is prepared from inactivated viruses, no risk to the developing fetus is anticipated.

		<p>Given that there have been hepatitis A cases associated with the food recall, the benefits likely outweigh the risks and can be recommended.</p> <p>HA vaccine may be administered, if indicated, to women who are breastfeeding.</p>
Immunocompromised (by medical condition or long-term medication)	Hepatitis A vaccine	<p>According to the Canadian Immunization Guide and the 2016 NACI statement, people with immunosuppressive conditions should be offered immune globulin and hepatitis A vaccine because they may not mount as good of a response to the hepatitis A vaccine.</p> <p>However, given the level of risk in this particular type of exposure, hepatitis A vaccine is felt to be sufficient</p>
Chronic liver disease	Hepatitis A vaccine with case by case determination for immune globulin.	<p>There is a lack of data to support the benefit of serum immune globulin after 14 days from last exposure.</p> <p>If serum immune globulin is determined to be indicated, follow the current GamaSTAN® S/D product monograph which recommends a dose of 0.1 mL/kg.</p>

Table adapted from the Office of [the Chief Medical Officer of Health memo](#) dated July 31st, 2021:

Previously immunized individuals

For those previously vaccinated with hepatitis A vaccine:

- If two previous doses were provided at least 6 months apart, no additional doses are recommended.
- If one dose was provided less than 6 months ago, no additional doses are recommended until at least 6 months from the last dose.
- If one dose was provided 6 months or more in the past, one additional dose is recommended.

If a complete series of Twinrix vaccine was provided, no further vaccination is required. Twinrix is given as a two (when adult formulation used for under 16 years of age) or three dose series. If in doubt or unsure of vaccination status, individuals exposed in the past 14 days should receive one dose.

Disease process

Typically, Hepatitis A is an acute, self-limiting liver infection. Clinical presentation varies with age. Infection is usually asymptomatic in children and jaundice develops in < 10% of children six years and under. Symptoms may start 15 to 50 days after exposure and usually resolve on their own. Typically, acute clinical illness is characterized by:

- One to seven day prodrome period of abrupt onset fever, malaise, anorexia, nausea and abdominal pain followed by jaundice.
- Dark urine and light-colored stools, as well as pruritus may occur, and an enlarged liver may be seen.
- Extra-hepatic complications may occur.
- It has been reported that between 3% and 20% of cases may experience relapsing disease.
- Fulminant hepatitis A and death is rare. There is usually complete recovery without complications or sequelae. Chronic infection is not known to occur.

Diagnostic testing recommendations

- If patients present in your office with unexplained symptoms that are consistent with HAV, please consider ordering liver function tests (ALT, AST, ALP, GGT), and HAV IgM and IgG antibodies.
- Serology tests indicating IgM anti-HAV antibodies confirm recent infection. Antibodies are generally detectable in serum five to ten days after infection and usually decrease to undetectable levels within six months after onset of infection. In rare cases, antibodies may persist for longer. Detection of IgG antibodies signals recovery from acute hepatitis A infection. When IgG antibodies are detected alone, they indicate some level of immunity either from past infection or previous immunization.
- “Total hepatitis A virus antibody” (total IgM and IgG antibody) is not a confirmatory test for acute HAV infection but is used as an initial screening test in some laboratories. For further information about hepatitis A IgM and IgG human diagnostic testing, contact the Public Health Ontario Laboratories or refer to the Public Health Ontario Laboratory Services webpage:
http://www.publichealthontario.ca/en/ServicesAndTools/LaboratoryServices/Pages/Hepatitis_A_Diagnostic_Serology.aspx#.VxT6K45VhXs

Common questions and answers

Should post-exposure prophylaxis be delayed due to recent COVID-19 vaccination?

- No. Individuals should receive hepatitis A vaccine as soon as it is offered for post-exposure prophylaxis, regardless of the timing of the most recent dose of COVID-19 vaccine. Although NACI recommends to wait at least 28 days after any dose of a COVID-19 vaccine before the administration of another non-COVID-19 vaccine, NACI notes that this interval is precautionary and that the receipt of a vaccine for post-exposure prophylaxis is a circumstance in which simultaneous administration or a shortened interval is warranted.

Should hepatitis A vaccine given for post-exposure prophylaxis influence the scheduling of COVID-19 vaccine administration?

- NACI recommends to wait at least 14 days after the administration of another vaccine before administering a COVID-19 vaccine. The main rationale for this interval is to prevent erroneous attribution of an adverse event following immunization (AEFI) should this develop. NACI notes that the minimum waiting period between COVID-19 vaccines and other vaccines is precautionary and a shortened interval may be warranted on an individual basis, including in circumstances of receipt of vaccine for post-exposure prophylaxis.

Should hepatitis A immune status be checked?

- No. Hepatitis A immune status should not be checked prior to vaccination. If a person has been vaccinated in the past, see above for recommendations regarding need for additional vaccination. If the person indicates

that they have had hepatitis A infection in the past, this can be accepted if it was previously laboratory confirmed. If not previously laboratory confirmed, generally these people would be considered susceptible and should be managed as above.

Should exposed individuals in high-risk occupations or settings be restricted in their activities?

- No restrictions on activities are recommended for exposed individuals, including those who work as food handlers or health care providers or attend or work in child care centres provided they are asymptomatic. Extra attention to hand hygiene should be emphasized after using the washroom and before preparing food for others or caring for patients. Individuals should be counselled to stop working immediately should symptoms develop and to seek medical attention. It is important to note that children less than six years of age are generally asymptomatic or have non-specific symptoms. Extra attention to hand hygiene will be very important in young children to prevent spread from unrecognized infections.

What other recommendations should be provided for people who have been exposed to the recalled frozen mango products?

- Hand hygiene recommendations: Hand hygiene after using the washroom or changing diapers (if the child has been exposed to the recalled product) and before preparing food for others should be emphasized.
- Seeking medical care if symptoms develop: If symptoms develop in an individual who consumed the recalled product in the past six weeks, they should be advised to:
 - not prepare food for others
 - seek medical attention
 - notify their physician of their exposure
 - ensure blood is submitted for serology, and
 - ensure the local public health unit is notified.

For further information regarding Hepatitis A or to coordinate access to immune globulin please visit our website at www.smdhu.org or call our health connection line at 705-721-7520.

To report a suspect or confirmed case of hepatitis A please contact the Infectious Diseases team at (705) 721-7520 extension 8809 during business hours or after hours to 1-888-225-7851.