

Immunization Recommended for Healthcare Students and Students in Other High-Risk Occupational Programs

| Disease | Vaccine(s) | Acronym | Indication | Recommended Doses |
|------------------------------------|--------------------|---------|---|--|
| Tetanus Diphtheria Pertussis | Adacel Boostrix | Tdap | All healthcare students and students in other high-risk occupational programs. | <p>No documented history of primary series, complete a primary series of 3 doses:</p> <ul style="list-style-type: none"> • Day 0 • 4 to 8 weeks after first dose • 6 to 12 months after second dose. <p>Documented history of primary series:</p> <ul style="list-style-type: none"> • Reinforcing dose of tetanus/diphtheria/pertussis vaccine every 10 years. <p>No documented history of a dose of acellular pertussis vaccine as an adult:</p> <ul style="list-style-type: none"> • 1 dose of Tdap regardless of the interval since the last dose of tetanus containing vaccine. |
| Measles | MMR II Priorix | MMR | <p>All post-secondary healthcare students:</p> <ul style="list-style-type: none"> • Without documentation of 2 valid doses of measles-containing vaccine or without documented laboratory confirmed measles disease or serological evidence of measles immunity (measles IgG positive).¹ <p>All other post-secondary students:</p> <ul style="list-style-type: none"> • Born in 1970 or later without documentation of 2 valid doses of measles-containing vaccine or without documented laboratory confirmed measles disease or serological evidence of measles immunity (measles IgG positive).¹ • Born prior to 1970 without documentation of 1 valid dose of measles-containing vaccine or without documented laboratory confirmed measles disease or serological evidence of immunity (measles IgG positive).¹ | <p>All post-secondary healthcare students:</p> <ul style="list-style-type: none"> • 2 doses of measles-containing vaccine after 12 months of age. <ul style="list-style-type: none"> ○ Follow recommended minimum intervals for the specific vaccine. <p>All other post-secondary students born in 1970 or later:</p> <ul style="list-style-type: none"> • 2 doses of measles-containing vaccine after 12 months of age. <ul style="list-style-type: none"> ○ Follow recommended minimum intervals for the specific vaccine. <p>All other post-secondary students born prior to 1970:</p> <ul style="list-style-type: none"> • 1 dose of measles-containing vaccine after 12 months of age. |

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| Mumps | MMR II Priorix | MMR | <p>All post-secondary healthcare students:</p> <ul style="list-style-type: none"> Without documentation of 2 valid doses of mumps-containing vaccine or without documented laboratory confirmed mumps disease.¹ <ul style="list-style-type: none"> Positive mumps IgG serology is not an acceptable indicator of immunity. <p>All other post-secondary students:</p> <ul style="list-style-type: none"> Born in 1970 or later without documentation of 2 valid doses of mumps-containing vaccine or without documented laboratory confirmed mumps disease (positive mumps IgG serology is not an acceptable indicator of immunity).¹ Born prior to 1970 without documentation of 1 valid dose of mumps-containing vaccine or without documented laboratory confirmed mumps disease (positive mumps IgG serology is not an acceptable indicator of immunity).¹ | <p>All post-secondary healthcare students:</p> <ul style="list-style-type: none"> 2 doses of mumps-containing vaccine after 12 months of age. <ul style="list-style-type: none"> Follow recommended minimum intervals for the specific vaccine. <p>All other post-secondary students born in 1970 or later:</p> <ul style="list-style-type: none"> 2 doses of mumps-containing vaccine after 12 months of age. <ul style="list-style-type: none"> Follow recommended minimum intervals for the specific vaccine. <p>All other post-secondary students born prior to 1970:</p> <ul style="list-style-type: none"> 1 dose of mumps-containing vaccine after 12 months of age. |
| Rubella | MMR II Priorix | MMR | <p>Healthcare students:</p> <ul style="list-style-type: none"> Without documentation of at least 1 dose of rubella-containing vaccine or serological evidence of immunity (rubella IgG positive) who have face-to-face contact with patients in health care facilities.¹ | <p>Healthcare Students:</p> <ul style="list-style-type: none"> 1 dose of rubella-containing vaccine after 12 months of age. <ul style="list-style-type: none"> Follow recommended minimum intervals for the specific vaccine. |
| Hepatitis B | Engerix-B Recombivax HB | HBV | <p>Health care students' eligibility for hepatitis B vaccine is based on an assessment of the student's reasonably anticipated risk of:</p> <ul style="list-style-type: none"> Exposure to blood/bloody body fluids or sharps in the course of their work <p>and</p> <ul style="list-style-type: none"> Transmission of hepatitis B infection to individuals when performing procedures that expose the individual to blood/bloody body fluids. <p>See: Hepatitis B Risk Assessment.</p> <p>See: Occupational Considerations for Immunization.</p> | <p>Primary series standard schedule is:</p> <ul style="list-style-type: none"> 3 doses spaced at 0, 1 and 6 months. <p>When the second dose of vaccine has been delayed, give the third dose 5 months after second dose.</p> <p>Minimum intervals may be considered for individuals at high risk of hepatitis B infection.</p> <p>History of an alternative adolescent schedule is also acceptable:</p> <ul style="list-style-type: none"> 2 doses of 1 mL hepatitis B vaccine given on day 0 and 6 |

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| | | | <p>Pre-immunization serology</p> <p>Pre-immunization serology for previous hepatitis B infection is not indicated for all healthcare students.</p> <p>Serology (including anti-HBs, HBsAg and anti-HBc total) is indicated for the following high-risk populations with a high probability of past infection regardless of their immunization status:</p> <ul style="list-style-type: none"> Healthcare students who have emigrated from a country where hepatitis B is endemic. Healthcare students with lifestyle risks for infection. Healthcare students who are a spouse, sexual or needle sharing partner of a person that is a hepatitis B case or chronic carrier. Healthcare students who are a household contact of a person that is a hepatitis B case or chronic carrier. <p>Post-immunization serology</p> <p>All healthcare students who qualify for hepatitis B immunization:</p> <ul style="list-style-type: none"> Send for serology 1-6 months after completion of series. Complete post-immunization serology at time of assessment if not done within the recommended interval following immunization. Once a positive antibody result is documented, no further serology recommended. <p>Note: The following are serological markers of laboratory evidence of immunity or disease:</p> <ul style="list-style-type: none"> Positive anti-HBs Positive anti-HBc HBsAg positive/reactive <p>For detailed information on interpretation of hepatitis B serological tests, refer to Alberta public health disease management guidelines : hepatitis B –acute and chronic</p> | <p>months later. Refer to product monograph.</p> <p>Assess students who have received accelerated schedules of combined hepatitis A and B vaccine or hepatitis B vaccine using the minimum intervals outlined in the specific product monograph.</p> <p>Complete a series of hepatitis B vaccine to ensure immunity in students who have lab confirmation of positive anti-HBs without documentation of a complete series.</p> <p>Once a positive antibody result is documented, no further serology recommended.</p> |

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| | | | <p>See: Hepatitis B Virus Infection - High Endemic Geographic Areas.</p> <p>See: Hepatitis B Vaccine Recommendations Algorithm for Individuals Not at High-Risk of Past Infection</p> <p>See: Hepatitis B Vaccine Recommendations Algorithm for Individuals at High-Risk of Past Infection.</p> | |
| Varicella | Varilrix Varivax III | VZ | <p>Healthcare students with none of the following:</p> <ul style="list-style-type: none"> Documented history of 2 valid doses of varicella-containing vaccine. Laboratory evidence of immunity (varicella IgG positive). Laboratory confirmation of varicella disease (positive varicella PCR/NAT swab results). Physician diagnosed shingles disease (confirmed by physician office). Self-reported history or physician diagnosed varicella disease in Canada prior to a routine immunization program: <ul style="list-style-type: none"> In Alberta, prior to January 2001. For start dates of other Canadian jurisdictions see the NACI Varicella Proof of Immunity - 2015 Update | <ul style="list-style-type: none"> 2 doses of varicella vaccine with a minimum interval of 6 weeks between doses. Shingrix doses cannot be counted in a varicella vaccine series. Individuals who received their first dose of varicella-containing vaccine and subsequently developed laboratory confirmed (positive varicella PCR/NAT swab results) vaccine modified varicella disease do not require a second dose of varicella-containing vaccine. |
| Influenza | Note: Annual influenza vaccine(s) may vary from year to year as determined and provided by Alberta Health | FLU | All post-secondary students | 1 dose annually |
| COVID-19 | Available COVID-19 vaccine may vary as determined and provided | COVID-19 | All post-secondary students | See vaccine specific biological pages. |

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| | by Alberta Health. | | | |
| Polio | Imovax Polio | IPV | Healthcare students in healthcare settings: <ul style="list-style-type: none"> Complete a primary series as they present and receive a single lifetime reinforcing dose. This includes: <ul style="list-style-type: none"> Laboratory students handling specimens that may contain poliovirus Healthcare students who may be exposed to patients excreting wild or vaccine strains of poliovirus (contact with stool, fecal matter or pharyngeal secretions). | No documented primary series: <ul style="list-style-type: none"> Dose 1: day 0 Dose 2: 4 to 8 weeks Dose 3: 6 to 12 months after second dose. Documentation of primary series: <ul style="list-style-type: none"> 1 reinforcing dose at 18 years of age or older (at least 10 years after the primary series). |
| Meningococcal B | Bexsero | Men-B | Laboratory research, industrial and clinical laboratory students routinely exposed to N. meningitidis. <ul style="list-style-type: none"> Includes only those students involved in conducting subculture identification, susceptibility testing, serological and/or molecular characterization and deep freeze for storage. Laboratory students who only do initial specimen plants are not eligible. | Eligible laboratory students: <ul style="list-style-type: none"> 2 doses with minimum 4 weeks between doses. The need for a reinforcing dose has not been established. |
| Meningococcal | Menactra Menveo Nimenrix | MenC-ACYW | Laboratory research, industrial and clinical laboratory students routinely exposed to N. meningitidis. <ul style="list-style-type: none"> Includes only those students involved in conducting subculture identification, susceptibility testing, serological and/or molecular characterization and deep freeze for storage. Laboratory students who only do initial specimen plants are not eligible. | Eligible laboratory students: <ul style="list-style-type: none"> 1 dose. Booster dose every 5 years if risk continues. There is no data currently on the use of meningococcal conjugate quadrivalent vaccine in individuals 56 years of age and older. Off license use of this vaccine is recommended by AH with the expectation of similar increased immune response and local reaction rates compared to meningococcal polysaccharide vaccine. |
| Typhoid | Typherix Typhim Vi | TYVI | Laboratory students who regularly manipulate Salmonella typhi. | Eligible laboratory students: <ul style="list-style-type: none"> 1 primary dose. Reinforcing dose every 2 to 3 years for students if risk continues. |

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| Tuberculosis | Tubersol | PPD | <p>The purpose of baseline tuberculin skin test (TST) for healthcare students on enrolment is to establish baseline² Mycobacterium tuberculosis (TB) infection status in those individuals at risk for potential occupational exposure to an infectious case.</p> <p>The TST is recommended for healthcare students on enrolment (except those with a history of active TB disease or a history of a prior positive TST) as follows:</p> <ul style="list-style-type: none"> Those with undocumented³ prior TST results. Those with documentation of prior negative TST unless there has been a baseline TST within the past year (with no history of known exposure). Those without history of prior TST (do not recall having received a TST before). <p>See Tuberculin Purified Protein Derivative (PPD) (Mantoux) Biological Page.</p> | <p>Single baseline TST, unless there is a history of active TB disease or documentation of a previous positive TST.⁴</p> <ul style="list-style-type: none"> The TST must be read 48-72 hours later by a qualified provider, not self-read.⁵ |
| Rabies | Imovax Rabies RabAvert | RAB | Students attending a post-secondary institution and enrolled in a veterinarian, veterinary health technician or veterinary assistant program. | <p>No history of a primary series:</p> <ul style="list-style-type: none"> Complete a pre-exposure intradermal⁶ (ID) series of 3 doses: <ul style="list-style-type: none"> day 0 day 7 day 21 or 28 <p>Post-immunization:</p> <ul style="list-style-type: none"> Rabies antibody serology is recommended 2 weeks after the third dose to ensure an acceptable level of protection has been achieved. Rabies antibody serology is recommended every 2 years to determine immunity for students at continued risk of rabies exposure. Rabies antibody serology is recommended every 6 months to determine immunity for student research lab workers working with live rabies virus at risk of inapparent exposure. |

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| | | | | Reinforcing dose: Rabies antibody serology should be done first, and a reinforcing dose given only if level is below that recommended for protection. Post-exposure prophylaxis: Consult public health for specific information. |

¹ In general, serological testing to determine immunity to measles, mumps or rubella is not necessary or recommended and should not routinely be done for those who lack documentation of previous immunization.

² Health care students who may be working in health care facilities either during their training or on completion of their program should receive a baseline TST. Students in dental programs would not be included routinely as an eligible group for baseline TST unless they are working with high-risk individuals or in high-risk settings.

³ Individuals who give a history of blistering TST reaction should not receive a TST. Individuals with history of undocumented positive TST reaction (other than blistering) can receive a TST; if these individuals decline the baseline TST they do require a baseline chest X-ray within the past 6 months through their family physician.

⁴ Students with a history of active TB or positive TST should have a chest X-ray through their family physician.

⁵ Self-reading of TST is not an acceptable practice and should not be allowed under any circumstances.

⁶ The ID route should not be used for students who are immune compromised, taking steroids or on chloroquine.