

# Vaccination in Adults with Cirrhosis and IBD

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# Adult Vaccination Considerations 2013

- Live vaccines like Varicella, oral poliomyelitis, yellow fever, Zoster, MMR, oral typhoid, BCG and live attenuated influenza (intra-nasal), are contraindicated in:
  - Pregnancy
  - Immunosuppression
  - HIV with CD4 < 200
- Chronic Liver Disease (CLD)/ Cirrhosis:
  - No contraindications for any vaccine, except live-virus influenza.
  - Consult with “Travel Clinic” for not-routine vaccinations.
- IBD on long term (or soon to receive) steroids, immunomodulators, or Biologics:
  - Considered immunosuppressed.
  - If not yet immunosuppressed nor soon to start immunosuppression (within 3 months), check titers for immunity prior vaccination for MMR, varicella.

## Recommended Immunizations for Adults by Medical Condition

Talk to your healthcare professional about these vaccines:

If you have this health condition,

	Pregnancy	Weakened immune system (not human immuno-deficiency virus [HIV])	HIV Infection		Kidney disease or poor kidney function	Asplenia (if you do not have a spleen or it does not work well)	Heart disease, chronic lung disease, chronic alcoholism	Diabetes (Type 1 and Type 2)	Chronic Liver Disease
			CD4 count is less than 200	CD4 count is 200 or greater					
Influenza (Flu) <sup>1</sup>									Get a flu vaccine every year
Tetanus, diphtheria, pertussis (Td/Tdap)	1 dose Tdap each pregnancy								Get a Tdap vaccine once, then a Td booster every 10 years
Varicella (Chickenpox)		SHOULD NOT GET VACCINE							2 doses
HPV Vaccine for Women <sup>2</sup>									3 doses through age 26 yrs
HPV Vaccine for Men <sup>2</sup>					3 doses through age 26 yrs				3 doses through age 21 yrs
Zoster (Shingles) <sup>3</sup>		SHOULD NOT GET VACCINE							1 dose for those 60 yrs and older
Measles, mumps, rubella (MMR) <sup>4</sup>		SHOULD NOT GET VACCINE							1 or 2 doses
Pneumococcal (PPSV23)	1 or 2 doses								1 or 2 doses
Pneumococcal (PCV13)					1 dose				1 dose
Meningococcal					1 or more doses	1 or more doses			1 or more doses
Hepatitis A					2 doses				2 doses
Hepatitis B		3 doses			3 doses	3 doses			3 doses

Boxes this color show that the vaccine is recommended for all adults who have not been vaccinated, unless your healthcare professional tells you that you cannot safely receive the vaccine or that you do not need it.

Boxes this color show when the vaccine is recommended for adults with certain risks related to their health, job or lifestyle that put them at higher risk for serious diseases. Talk to your healthcare professional to see if you are at higher risk.

Boxes this color indicate the adult should NOT get this vaccine.

No recommendation

## Recommended Immunizations for Adults by Age

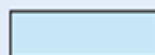
If you are this age,

**Talk to your healthcare professional about these vaccines:**

	19 - 21 years	22 - 26 years	27 - 49 years	50 - 59 years	60 - 64 years	65+ years
Influenza (Flu) <sup>1</sup>	Get a flu vaccine every year					
Tetanus, diphtheria, pertussis (Td/Tdap) <sup>2</sup>	Get a Tdap vaccine once, then a Td booster vaccine every 10 years					
Varicella (Chickenpox)	2 doses					
HPV Vaccine for Women <sup>3</sup>	3 doses			No recommendation		
HPV Vaccine for Men <sup>3</sup>	3 doses	3 doses	No recommendation			
Zoster (Shingles)	No recommendation				1 dose	
Measles, mumps, rubella (MMR) <sup>4</sup>	1 or 2 doses				No recommendation	
Pneumococcal (Pneumonia) <sup>5</sup>	1-3 doses					1 dose
Meningococcal	1 or more doses					
Hepatitis A	2 doses					
Hepatitis B	3 doses					



Boxes this color show that the vaccine is recommended for all adults unless your healthcare professional tells you that you cannot safely receive the vaccine or that you do not need it.



Boxes this color show when the vaccine is recommended for adults with certain risks related to their health, job or lifestyle that put them at higher risk for serious diseases. Talk to your healthcare professional to see if you are at higher risk.



No recommendation

# Who is Considered Immunosuppressed in IBD ?

- Current use or discontinuation within the last 3 months of:
  - Prednisone  $\geq$  20 mg/d (or equivalent) for 2 weeks or more.
  - 6-MP or Azathioprine therapy.
  - Methotrexate (MTX) Therapy.
  - Infliximab, Adalimumab, Certolizumab, or Natalizumab.
- Significant protein-calorie malnutrition.

# Vaccines in Adults with IBD

Vaccine	When to offer	Schedule
Influenza Inactivated	After age 6 months	Yearly; “high dose” after age 65
Tetanus, diphtheria, pertussis	When first seen Each pregnancy	Tdap first, then Td every 10 years. Tdap for every pregnancy (week 27-36)
Varicella	When first seen, if not immune and <b>not immunosuppressed</b> nor pregnant	2 doses, 4-8 weeks apart
HPV female	If younger than 26 (and older than 11)	3 doses at 0, 1, 6 months
HPV male	If younger than 21 (26 if MSM) (and older than 11)	3 doses at 0, 1, 6 months
Zoster	At age 60, even if they have had Zoster. <b>Not if immunosuppressed.</b>	1 dose
Measles, mumps, rubella	When first seen, if born 1957 or after, sero-negative, and <b>not immunosuppressed</b> nor pregnant.	2 doses, 4 weeks apart.
Pneumococcus PPSV 23	When first seen	Every 5 years x 2 doses, before age 65, one last dose at age 65 (total 2-3 doses).
Meningococcal	When first seen. Military recruit, college and age 16-21, functional asplenia, HIV infected	2 doses, 2 months apart; MCV4 until age 55 and MPSV4 after.
Hepatitis A	When first seen, if not immune.	2 doses at 0 and 6 months
Hepatitis B	When first seen, if not immune.	20 mcg IM in deltoid at 0, 1, 6 months; or 0, 1, 2, 12 months

# Live vaccines in Household of Immunosuppressed Patient

- Immunosuppressed patient may develop infection from live-vaccine given to household contacts.
  - Oral Poliomyelitis and Rotavirus ARE CONTRAINDICATED in this situation.
  - MMR, varicella, zoster, and BCG vaccines are NOT CONTRAINDICATED in household contacts.

# Vaccines for Traveling in Immunosuppressed IBD Patient

- AVOID live attenuated vaccines:
  - Yellow fever
  - MMR
  - Oral polio
  - Oral typhoid
  - BCG
  - Intranasal influenza



# Vaccines for Traveling in Immunosuppressed IBD Patient

- Inactivated vaccines are permitted:
  - Rabies
  - Japanese encephalitis
  - Injectable typhoid
  - Injectable polio
  - Hepatitis A
  - Hepatitis B
  - Diphtheria
  - Tetanus
  - HPV
  - Meningococcal

# Vaccines in Adults with CLD/Cirrhosis

Vaccine	When to offer	Schedule
Influenza Inactivated	After age 6 months	Yearly; high dose after age 65
Tetanus, diphtheria, pertussis	When first seen Each pregnancy	Tdap first, then Td every 10 years. Tdap for every pregnancy (week 27-36)
Varicella	When first seen, if not immune and <b>not immunosuppressed</b> nor pregnant.	2 doses, 4-8 weeks apart
HPV female	If younger than 26 (and older than 11)	3 doses at 0, 1, 6 months
HPV male	If younger than 21 (26 if MSM) (and older than 11)	3 doses at 0, 1, 6 months
Zoster	At age 60, even if they have had Zoster. <b>Not immunosuppressed.</b>	1 dose
Measles, mumps, rubella	When first seen, if born 1957 or after, seronegative, and <b>not immunosuppressed</b> nor pregnant.	2 doses, 4 weeks apart.
Pneumococcus PPSV 23	When first seen	Every 5 years x 2 doses, before age 65, one last dose at age 65 (total 2-3 doses).
Meningococcal	When first seen. Military recruit, college and age 16-21, functional asplenia, HIV infected	2 doses, 2 months apart; MCV4 until age 55 and MPSV4 after.
Hepatitis A	When first seen, if not immune.	2 doses at 0 and 6 months
Hepatitis B	When first seen, if not immune.	20-40 mcg IM in deltoid at 0, 1, 6 months; or 0, 1, 2, 12 months