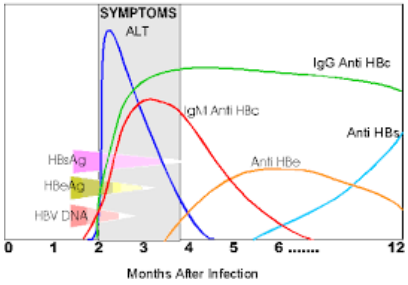
Acute Gastroenteritis*	
Presentation	Diarrhea (3+ loose/watery stools per day), vomiting, fever, anorexia, cramping. Common, 2 episodes/ year on avg in children < 5.
Pathophys	• **Viruses** (**rotavirus, norovirus**, enteric adenovirus, calicivirus, astrovirus, enterovirus) are major cause → low-grade fever, vomiting, watery diarrhea WITHOUT blood. • Bacteria (SSYCE +C.Diff) cause infiltration of mucosal lining → fever, abdominal pain, **bloody stools, positive stool leukocytes** • Parasitic (*Giardia, Cryptosoporidia, Cyclospora, E. histolytica*)
Treatment	• Dehydration score determines management. If severe, obtain POC BG + lytes and start IVF. • Otherwise, oral rehydration solution, e.g. Pedialyte or ½ strength apple juice (theoretical risk that high osmolality fluids will worsen diarrhea and hypoNa fluids will lead to hypoNa, but one RCT demonstrated improved outcomes w/ ½ strength apple juice b/c Pedialyte = not tasty.) No evidence for bowel rest or bland diet.

Infectious Hepatitis	
Hepatitis A	
Transmission	Fecal-oral, blood
Epi	High in Mexico, S. America, Africa, Asia
Incubat	2-8 wks
Prophylaxis	HepA Vaccine. pre- / post-exposure with polyclonal IgG
Treatment	• Supportive • Vit K for coagulopathy
Prognosis	Usually self-limiting
Hepatitis B	
Transmission	Blood, sex, maternal-fetal (90% vertical transmission rate, but **infants almost always become chronic carriers**; OK to breastfeed)
Epi	• 1-2% in US • Higher in Asia and South America • 10-20% in China, sub-Saharan Africa
Incubat	1-4 mo
Prophylaxis	**Post-exposure with HBIg and HBV vaccine within 12 hours** (newborns born to HBV+, needlesticks)
Treatment	• **Entecavir** • **Tenofovir** • **Peginterferon alfa-2a** • **IFNa**: 20-50% will seroconvert, but lots of systemic side effects • **Lamivudine**: high rate of resistance
Prognosis	• Self-limited or progression to chronic HBV/carrier status (esp. neonates) • Cirrhosis in 3% • Increased risk of hepatocellular CA (yearly RUQ ultrasound, AFP level)
Serologies	• **HBsAg** (surface antigen): indicative of **acute** infection, disappears in 3-6 months • **HBsAg** for **>6 months: carrier state** • **HBeAg** (secretory protein) and **HBV DNA** by PCR suggest **active viral replication** • **IgM anti-HBc** (antibody to core protein): secondary indicator of **acute** infection • **HBsAb** (antibody to surface protein): neutralizing antibody, suggests **recovery or response to HBV vaccine**

Infectious Hepatitis

Hepatitis B

Serologies



Interpretation of Tests for Acute Hepatitis B

Anti-HBc IgM	Anti-HBc IgG	HBsAg	Anti-HBs	Interpretation
Positive	Negative	Positive	Negative	Acute HBV infection
Negative	Negative	Positive	Negative	Early acute HBV infection
Negative	Positive	Negative	Positive	Resolved acute HBV infection
Negative	Negative	Negative	Positive	Not infected Prior vaccination for HBV
Negative	Negative	Negative	Negative	Not infected
Negative	Positive	Positive	Negative	Chronic HBV infection

Hepatitis C

Transmission	Blood, sex, maternal-fetal (<5% vertical transmission rate; OK to breastfeed)
Epi	Seroprevalence 0-1% worldwide
Incubat	1-3 mo
Prophylaxis	None
Treatment	Direct-acting antiretrovirals (DAA), specific treatment depends on genotype. (ledipasvir/sofosbuvir, sofosbuvir/ribavirin)
Prognosis	• 20% spontaneous clearance • Remainder will have slow progression to cirrhosis/hepatocellular CA if untreated

Hepatitis D (only if co-infected w/HepB)

Transmission	Blood, sex (less common)
Epi	<3% of HBV+ patients
Incubat	3-7 wks
Prophylaxis	None
Treatment	• I FN-based • Lamivudine is not helpful
Prognosis	Worse prognosis and faster progression than HBV alone