

THE BAILEY HEALTH CLINIC

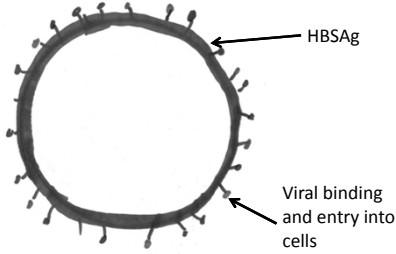
Hepatitis B:
Why we order so many lab tests
and how they help us

Dr. R. J. Bailey

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The Structure of Hepatitis B Virus

The outer lipid envelope

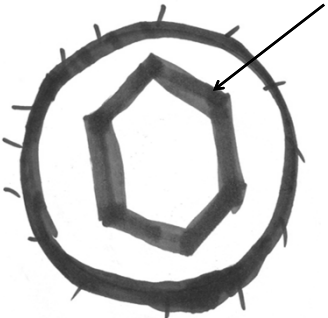


HBSAg

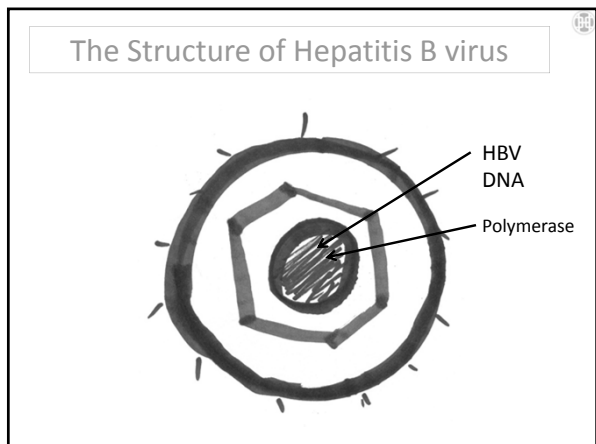
Viral binding and entry into cells

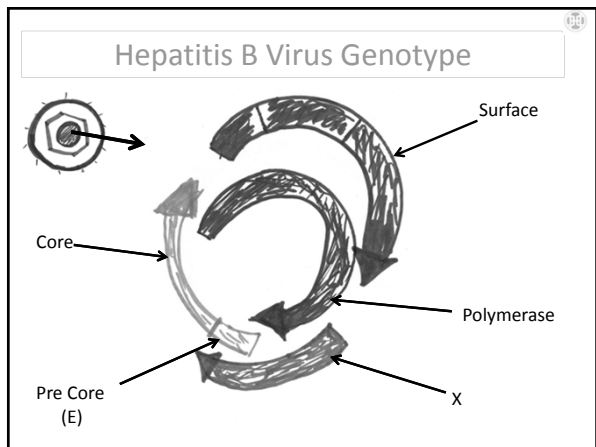
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The Structure of Hepatitis B Virus



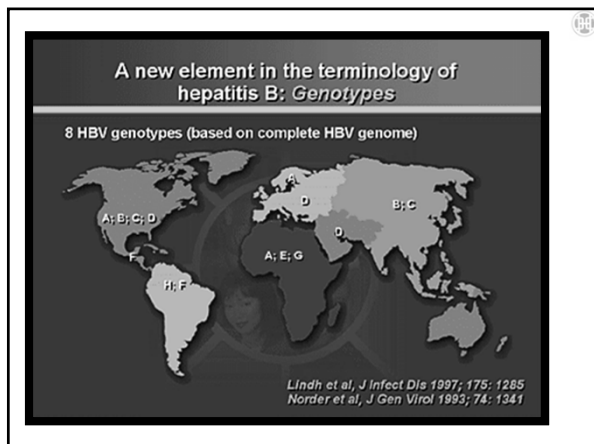
Core Proteins





Hepatitis B Tests

Test	Importance
HBsAg	Infectious titers reflect the amount of DNA
HBV DNA	Amount of virus
HBsAb	Recovery and Immunity
IgM Anti-HB core	Acute infection
IgG Anti-HBc	Previous or ongoing infection Persistent for life
HBe Ag	Active viral replication
Anti HBe	Recovery/resolved/low risk liver damage
HBV DNA + >20,000 AL↑ <2000 AL↑	Guides for treatment
Fibroscan	
HBsAg titre	Correlated with HBV DNA and CCC DNA when Eag + good correlation When Eag – less reliable correlation



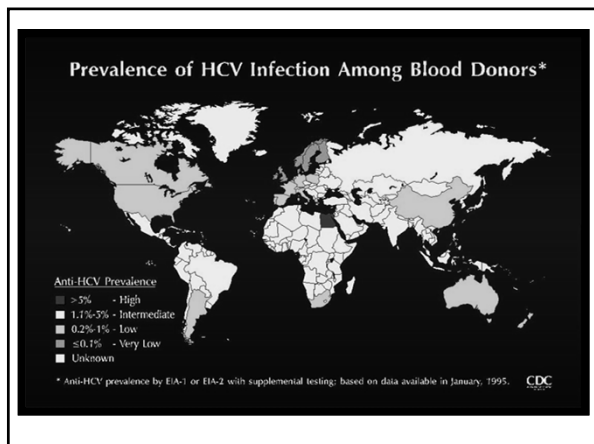
Hepatitis B Genotypes

Genotype	Country	Note
A	North America, Africa, Northern Europe and India	Responds to INF 37%
B	Asia and USA	Responds to INF
C	Asia and USA	Hepatocellular cancer more likely. Ultrasound Q6 months.
D	Southern Europe, India and Middle East	Responds to INF
E	Africa	
F	South America	
G	France and USA	
H	South America and California	

Hepatitis C

In Canada 250,000 people are estimated to have been infected by hepatitis C

25% don't know they are infected



Screening for Hepatitis C

- Hepatitis C Antibody +
 - 80% Hepatitis C
 - 20% Past Hepatitis C

Measure HCV RNA

Hepatitis C

Genotype	Simeprevir	Sofosbuvir	IL28B	Q80K	Cost
1a	Yes	Yes	CC TC TT No longer important	Factor in 1a.	?
1b	Yes	Yes		Simeprevir yes	
2		Yes No Peg		Sofosbuvir no	
3		Yes No Peg			
4		Yes			
5		Yes			
6		Yes			