

## SIGNS OR SYMPTOMS OF HEPATITIS C

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### General:

- Fatigue
- Nausea
- Weight loss
- Fever or Chills
- Anorexia
- Weakness

### Dermatology:

- Jaundice
- Pruritis
- Spontaneous bruising
- Hair pattern
- Palmar erythema
- Clubbing
- Spider angiomata
- White nails

### GI:

- Abdominal discomfort
- Diarrhea
- Constipation
- Vomiting
- GI Blood loss
- Pale stool

### MSK:

- Arthralgias
- Arthritis
- Edema
- Asterixis
- Dupuytren's contracture
- Muscular wasting

### GI:

- Hepatomegaly
- Liver tenderness
- Liver nodules
- Hepatic bruit/ rub
- Splenomegaly
- Ascites

### Head & Neck:

- Icterus
- Parotid enlargement

### Psych/Other:

- Confusion
- Somnolence
- Dark urine
- Gynecomastia
- Testicular atrophy

## COUNSELING FOR THE HEPATITIS C POSITIVE PERSON

### F A S T F A C T S

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- 15% - 25% of acute HCV infection spontaneously resolve (75 - 85% get chronic infection)
- 3 - 20% of people with chronic infection will develop cirrhosis in 20 years
- Of those with cirrhosis, 1 - 4% per year develop liver cancer
- Minimal risk of transmission between long-term sexual partners
- 5 - 10% risk of vertical (maternal-infant) transmission
- 4 - 10% risk of transmission from needle stick injury from HCV + source
- HCV positive moms can breastfeed unless nipples are cracked or bleeding

## REDUCE RISKS OF DISEASE PROGRESSION & TRANSMISSION

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- AVOID ALCOHOL INTAKE
- Never donate blood, organs, semen, tissues
- Do not share sharp instruments/personal hygiene equipment with HCV+ person: eg. Razors, Nail clippers, Scissors, Toothbrush
- Discuss HCV status with sexual partners
- In non-monogamous relationships, use condoms for sex – especially during menstruation to reduce risks of co-infections (HIV/HBV)
- For IDUs – Do not share drug equipment: use new equipment with each injection.
- Careful use of medication with potential liver toxicity
- Consider the potential health risks of tattooing and body piercing

## Primary Care Management of

# Hepatitis C

## Physicians' Desk Reference

## RISK FACTORS FOR HEPATITIS C

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- Injection drug use (IDU) +/- shared equipment/drug
- Snorting cocaine +/- shared equipment
- Blood transfusion or blood products before 1992
- Unhygienic tattoos & body piercing
- Incarcerated
- Hemodialysis
- Needle stick injuries
- Mother with HCV (rare)
- Vaccinations in regions with high HCV prevalence (eg., Egypt, Italy, Japan)
- Sharing sharp instruments/personal hygiene equipment with HCV+ person
  - Razors
  - Nail clippers
  - Scissors
  - Toothbrush
- Higher Risk Sexual Activity
  - Sexual partner with HCV infection
  - Multiple sexual contacts
  - Unprotected anal intercourse
  - Partner with STI
  - Non-monogamous unprotected sexual intercourse

## HEPATITIS C

### WHO SHOULD BE TESTED?

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- Any risk factors identified
- Any signs or symptoms of hepatitis C (see backpage)
- Unexplained Elevated LFTs and/or enzymes, specifically ALT

## WHAT TESTS SHOULD BE ORDERED?

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1. **Anti-HCV** – single test  
**Consider merit of 2 – 5**
2. HBsAg and/or anti-HAV (IgM)
3. HIV antibody (with informed consent)
4. Liver enzymes (ALT, AST)
5. Add HCV-RNA if:
  - a. Previous Anti-HCV+ but no risk factors and normal liver enzymes
  - b. Immunocompromised with ↑ liver enzymes
  - c. Suspected to have acute HCV infection
  - d. Indeterminate anti-HCV result

# HEPATITIS C INVESTIGATION

## Care Map

### INTERPRETATION OF RESULTS

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Anti HCV	Liver enzymes	RNA	DIAGNOSIS	IMMEDIATE ACTION	FOLLOW UP
+	↑	+	<b>HCV infection</b>	See ACTIONS 1-8 below 9. Refer to experienced colleague* if no contraindications to therapy	As per experienced colleague's communication
+	N	+	<b>Likely HCV infection</b> Consider possible fluctuating activity or occult activity	See ACTIONS 1-8 below 9. Repeat liver enzymes q1mos x 6 mos 10. Refer to experienced colleague* if enzymes become elevated	As per experienced colleague's communication
+	↑	-	<b>Likely HCV infection</b> Consider possible low level viremia, false positive, other liver diseases	See ACTIONS 1-8 above 9. Repeat liver enzymes & RNA at 3 mos 10. Refer to experienced colleague	As per experienced colleague's communication
+	N	-	<b>Possible HCV infection</b> Consider possible resolved HCV infection, fluctuating infection, false positive antibody, low level viremia	See ACTIONS 1-8 below 9. Repeat liver enzymes & RNA at 3 mos	<b>If Low risk:</b> ● if RNA negative and liver enzymes normal – no further follow up required <b>If High risk:**</b> ● repeat liver enzymes & RNA q6-12mos x 2 yrs <b>Refer to experienced colleague if RNA + or liver enzymes ↑</b>
-	↑	+	<b>Possible HCV infection</b> Consider possible immuno-suppression, false negative Anti-HCV, acute HCV	Test for HIV Refer to experienced colleague	As per experienced colleague's communication
-		-	<b>HCV Negative (no infection)</b>	No further action required	

\* experienced colleague may be a hepatologist, gastroenterologist, infectious disease specialist, or family physician with experience in HCV management.

\*\* high risk people have identified risk for HCV

### REFER TO SPECIALIST

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1. Cirrhosis
2. Age <18 or >60
3. Persistent abnormal ALTs
4. Suspect acute HCV
5. HIV positive
6. Other significant medical problems (eg. Diabetes)
7. Contraindications to therapy
8. Pregnant woman
9. Extra-hepatic HCV (e.g., PCT, lichen, planus)

### ABBREVIATION KEY:

↑	ELEVATED
+	POSITIVE
-	NEGATIVE
✓	CHECK
N	NORMAL
ALT:	ALANINE TRANSAMINASE
AST:	ASPARTATE TRANSAMINASE
GGT:	GAMMA-GLUTAMYL TRANSPEPTIDASE
ALKPHOS:	ALKALINE PHOSPHATASE
FE:	IRON
PCT:	PORPHYRIA CUTANEA TARDA
HAV:	HEPATITIS A VIRUS
HBV:	HEPATITIS B VIRUS
HCV:	HEPATITIS C VIRUS
HIV:	HUMAN IMMUNODEFICIENCY VIRUS
ANTI-HAV:	ANTIBODY TO HAV
ANTI-HCV:	ANTIBODY TO HCV
PCR:	POLYMERASE CHAIN REACTION
HBSAG:	HBV SURFACE ANTIGEN
ANA:	ANTINUCLEAR ANTIBODY
TIBC:	TOTAL IRON BINDING CAPACITY
STI:	SEXUALLY TRANSMITTED INFECTION
LFT:	LIVER FUNCTION TEST
u/s:	ULTRASOUND
IDU	INJECTION DRUG USE

### ACTION: FOR ALL PEOPLE WITH POSITIVE ANTI-HCV RESULT

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1. **Do liver enzymes & LFT's**
  - Liver enzymes = AST, ALT
  - LFT's = T-bili, INR, Albumin
  - Check at least 3 times over next 6 months
2. **Do HCV-RNA (PCR)**
3. **Offer HIV Antibody tests with pre and post-test counselling**
4. **Offer HAV/HBV serology +/- or vaccination**
5. **Rule out other causes of hepatic disease:**
  - Drugs (✓ History)
  - Alcohol (AST/ALT >1)
  - But same ratio seen in cirrhosis**
  - HBV (✓ HBsAg)
  - HAV (✓ Anti-HAV IgM)
  - Fatty liver (✓ u/s if obese or diabetic)
  - Autoimmune hepatitis (✓ ANA)
  - Wilson's disease (✓ ceruloplasmin)
  - Hemochromatosis (✓ Fe, TIBC, ferritin)
6. **Risk Factor Review (see Page 1, Box 1)**
7. **Physical Exam**
8. **Patient Education (see Back Page, Box 8 & 9)**
  - Provide relevant patient information on hepatitis C
  - Provide instructions on prevention of transmission
  - Discuss harm reduction strategies and self-care
  - Family member screening if anxious
  - Provide other patient resources and psychosocial support

### ACTION: FOR PEOPLE WITH INDETERMINATE ANTI-HCV RESULT

1. Repeat Anti-HCV in 1 to 3 months
2. If still indeterminate, do HCV-RNA (PCR)

PLEASE SEE BACK PAGE FOR MORE INFORMATION

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