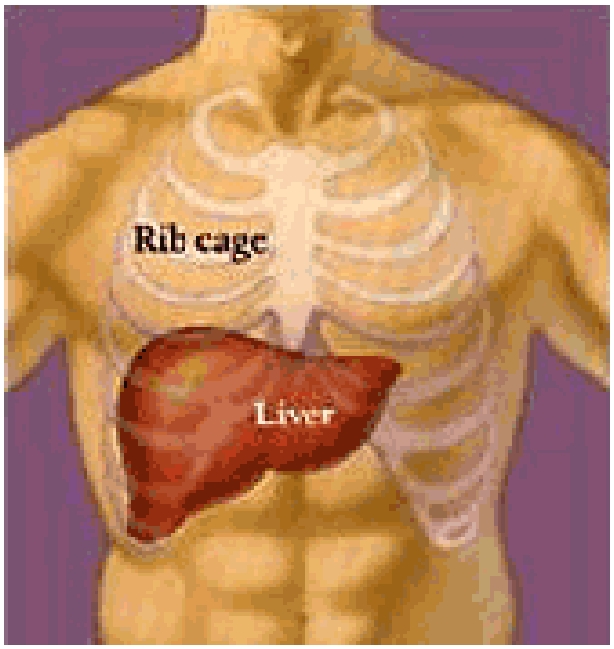
# Viral Hepatitis Resource and Services Directory

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# VIRAL HEPATITIS:
# A PUBLIC HEALTH CHALLENGE

It is estimated that more than 18,000 Rhode Islanders have a hepatitis C infection. Many who are infected do not even know it.

**HEALTH CARE PROVIDERS**—including those specializing in STD/HIV, family planning, and substance abuse—are critical links in the prevention, diagnosis, and treatment of viral hepatitis. This resource guide and Service Directory will help you integrate important viral hepatitis messages into your regular patient/client education practices. Both youth and adults are equally at risk for hepatitis.

## WHAT IS VIRAL HEPATITIS?

Viral hepatitis is an inflammation of the liver that is caused by a viral infection, but can also be caused by bacteria, drugs, toxins, or excessive alcohol intake. At this time there are five viruses known to affect the liver and cause hepatitis: A, B, C, D and E.

- **At some point in time, an estimated 30% of the population has been infected with Hepatitis A.**
- **In the United States, over 1 million people are infected with Hepatitis B.**
- **Nearly 4 million people nationwide are infected with Hepatitis C.**

# How to Use This Directory Effectively

The Department of Health values all providers who care for Rhode Islanders who may have an infectious disease and/or co-occurring disorders. Thank you for choosing to use this directory as an informational and reference guide to assist you in your work.

The challenge we all have is to properly assess the patients we are working with and then provide appropriate assurances for their care. Oftentimes referrals are a necessary part of this care and this directory is intended to assist you and your staff in making those referrals.

The complexities associated with individuals infected with viral hepatitis are well founded. Add to that the real possibility that they may not have adequate insurance and/or may have multiple conditions. Clearly, you as the provider caring for these individuals are greatly challenged.

Inside these pages is information and resources that will assist you in the following areas:

- Referrals for Hepatitis C Virus (HCV) testing
- A list of Medical Providers Who Treat HCV
- RI HCV Support Groups
- Local and National Helplines
- Websites
- Substance Abuse Treatment Services
- Facts Sheets
- Frequently Asked Questions

If you have any questions regarding this directory kindly call:

**Lorraine Asselin Moynihan, MA, MSW**
**Viral Hepatitis/HIV Counseling, Testing and Referrals**
**Program Manager**
**RI Department of Health**
**Office of HIV/AIDS and Viral Hepatitis**
**401-222-7544**

# HOW TO INTEGRATE HEPATITIS PREVENTION INTO PATIENT/CLIENT EDUCATION

## INTEGRATING HEPATITIS EDUCATION

Talking about contraception? STDs? HIV? Drug use? Hygiene?
Educating patients/clients who are at high risk about viral hepatitis can easily become part of your current practice. Here are some examples:

| **HEPATITIS A VIRUS** | **HEPATITIS B VIRUS** | **HEPATITIS C VIRUS** |
|---|---|---|
| • *"Good hygiene (being clean) is important to your overall health. Washing your hands with soap and water helps kill the germs that cause infections including Hepatitis A."*<br>• *"Rhode Island offers free Hepatitis A vaccines for people under the age of 19."* | • *"Use a condom every time you have sex to prevent the spread of STDs such as gonorrhea, hepatitis B, or HIV."*<br>• *"Hepatitis B is 100 times more contagious than HIV, and can lead to liver cancer, cirrhosis, and even death."*<br>• *"Rhode Island offers free Hepatitis B vaccines for people under the age of 19."* | • *"If you shoot or snort drugs, don't share works (needles, cottons, cookers). Sharing works puts you at risk of getting HIV and hepatitis C."*<br>• *"Hepatitis C can cause liver cancer, liver scarring, and in some cases death."*<br>• *"There is no vaccine available for hepatitis C."* |

## TIPS ON STARTING A SENSITIVE CONVERSATION

**To begin a conversation about viral hepatitis (or other STDs or HIV) ask:**

*"Have you ever heard about hepatitis? …*

*What have you heard?"*

*"Do you know anyone who has hepatitis?"*

*"Do you know that hepatitis B is 100 times more contagious than HIV?"*

**Normalizing risky behaviors can help. Start your conversation with:**

*"People your age sometimes experiment with drugs and alcohol.*

*Have you ever tried drugs?*

*Have you ever shared injection drug equipment or a straw to snort drugs?"*

*"Do you think people your age are practicing safe sex, for example, by using condoms to protect themselves from sexually transmitted diseases and pregnancy?"*

# TIPS ON COUNSELING

Sex practices and drug use are difficult topics to discuss—especially with youth. But it is important to provide everyone with information on how to protect themselves. Here are some tips to keep in mind when talking with patients/clients about practicing safe sex and reducing or stopping substance use.

- Assure patient confidentiality.
- Listen to your patient.
- Accept that your patient/client's values may be different from your own.
- Avoid judging a patient/client's personal behaviors.
- Be sensitive to expressions and gestures (both yours and your patient/client's). Help your patients explore their options for reducing or stopping unsafe sexual or substance-using behaviors.

# ASSESSING PATIENT RISK

Ask patients/clients to respond to the following statements to quickly assess their hepatitis risk level:

| | | |
|---|---|---|
| I wash my hands with soap and water before eating and after going to the bathroom. (Hepatitis A) | Yes | No |
| I use a condom every time I have sex. (Hepatitis B or C) | Yes | No |
| I have never injected or snorted drugs. (Hepatitis C) | Yes | No |

Patients who answer "no" to any of these questions may be at risk for viral hepatitis.

# WHAT TO TELL PATIENTS/CLIENTS WHO ARE AT RISK

All patients/clients, but especially those who are at risk, should learn about viral hepatitis. Our conversations with teens and others showed they want to know what viral hepatitis is and how to prevent it. When talking to patients/clients, the use of meaningful statistics can have a powerful effect.

***Example: Hepatitis B is 100 times more contagious than HIV*.**

Tell patients/clients who are at risk to:

- Get immunized against *both* hepatitis A and B.
- Use a latex condom every time you have sex.
- Never share works with anyone if they shoot or snort drugs.
- Wash their hands with soap and water often and thoroughly.
- Only get tattoos or ear, tongue, and other body piercings from licensed places. (Contact the HEALTH-RI @ 222-2827 for licensed facilities)
- Avoid contact with someone else's blood (e.g. cuts or scrapes), and don't
- Avoid eating raw shellfish.

# TESTING INFORMATION

Once a patient/client has been identified as being at high risk for viral hepatitis infection, testing should be considered.
The CDC recommends testing for hepatitis C, and immunizing against hepatitis A and B. For more information, visit www.cdc.gov/hepatitis.
Testing for hepatitis C in Rhode Island is confidential. To help your patients locate a testing site in their area, call the Family Health Information Line a 1-800-942-7434.

# IMMUNIZATION INFORMATION

• Hepatitis A and B immunizations are recommended for all who are at risk.

• People infected with hepatitis C should receive hepatitis A and B immunizations to prevent further liver damage.

• There is no immunization available against hepatitis C.

Most youth have received the hepatitis B immunization as a newborn, or in school through *Rhode Island's Vaccinate Before You Graduate Program.* However, there are still many youth and adults who have not been immunized against hepatitis B.

Ask the patient/client you serve if they know their hepatitis immunization status, and check their immunization record. If an immunization record does not exist, start one for them.

***Cost and availability***

Rhode Island is offering free hepatitis A and B immunizations to high-risk adolescents under the age of 19. For more information about where your patients can go for free hepatitis A and B shots, call the Family Health Information Line at 1-800-942-7434.

All appointments are confidential.

**SITES WHERE HEPATITIS C TESTING**
**AND PREVENTATIVE VACCINES**
**FOR HEPATITIS A VIRUS AND HEPATITIS B VIRUS**
**ARE AVAILABLE**
**FOR UNINSURED AND UNDERINSURED**

**AIDS Care Ocean State**
Broad Medical Building
557 Broad Street
Providence, RI 02907
781-0665
Testing/Vaccination Times
Tuesday 1:00 – 3:00 p.m.
Wednesday 1:00 – 3:00 p.m.

**Comprehensive Community Action Program (CCAP)/ Family Health Services/Coventry**
191 MacArthur Blvd.
Coventry, RI 02816
828-5335
Tuesday 9:00 – 4:30 p.m.
Thursday 9:00 – 4:30 p.m.
Friday 9:00 – 4:30 p.m.

**Family Health Services/Cranston**
1090 Cranston Street
Cranston, RI 02920
Monday – Friday 9:00 – 4:45

**Wilcox Family Health/Warwick**
226 Buttonswood Avenue
Warwick, RI 02886
732-9090
Monday 9:00 – 4:30 p.m.
Wednesday 9:00 – 4:30 p.m.

**Comprehensive Community Action Program (CCAP)/ Family Health Services/**Men's Health Collaborative/Megaplex
257 Allens Avenue
Providence, RI 02905
831-5522
Testing/Vaccination
Times Vary/Revolving
Monthly Schedule

**MAP Behavioral Health**
324 Elmwood Avenue
Providence, RI 02907
781-9915 or 781-9916
Thursday 10:00 – 1:00 pm
or by appointment

**MAP Behavioral Health/ Progreso Latino**
626 Broad Street
Central Falls, RI 02863
781-9915 or 781-9916
1st & 2nd Wednesday of each month 9:00 –11:00 am

**Community Access/ The Miriam Hospital**
369 Broad Street
Providence, RI 02907
455-6879
Monday - Thursday
9-12:00 and 1:00 – 4:00 pm
**NO VACCINES ADMINISTERED**

**SITES WHERE HEPATITIS C TESTING IS AVAILABLE FOR UNINSURED AND UNDERINSURED**
**(Individuals may be required to enroll as patients. Sliding scale fees are available upon individual qualification. Please call each health center for more information.)**

Chad Brown Health Center**
285A Chad Brown Street
Providence, RI 02908
401-274-6339

Center of Women's
Digestive Disorders**
100 Dudley St. (3rd floor)
Providence, RI 02905
401-453-7953

East Bay Community Health**
19 Broadway
Newport, RI 02840
401-848-2160

Family Health Services**
191 MacArthur Blvd.
Coventry, RI 02816
401-828-5335

Family Health Services **
1090 Cranston Street
Cranston, RI 02920
401-943-1981

Planned Parenthood of RI
111 Point Street
Providence, RI 02903
401-421-9620

Rhode Island Hospital
(Primary Care)
593 Eddy Street
Providence, RI 02903
401-444-4741

Thundermist Health Center**
1219 Main Street
West Warwick, RI 02893
401-615-2800

Thundermist Health Center
of South County**
1 River Street
Wakefield, RI 02879
401-783-0523

Thundermist Health Center**
450 Clinton Street
Woonsocket, RI 02895
401-767-4100

Tri Town Health Center**
1126 Hartford Avenue
Johnston, RI 02919
401-351-2750 X1141

**SITES ADMINISTERING HEPATITIS B VACCINES TO THEIR PATIENTS.

Rhode Island Hospital
(GI Clinic)
593 Eddy Street, APC Bldg.
Providence, RI 02903
401-444-5260
Will provide treatment but a physician's referral is necessary.
Need to apply for community free services.

**Rhode Island HCV Treatment Providers (insurance accepted and/or required):**

Thundermist Health Center
450 Clinton Street
Woonsocket, RI 02895
767-4100
Grace Accetta, RN

Renaissance Medical Group
790 North Main Street
Providence, RI 02904
455-3574
Hatem Shoukeir, MD

Center for Women's
Gastrointestinal Disorders
Women & Infants Hospital Campus
100 Dudley Street,
3rd Floor Suite 3356
Providence, RI 02905
453-7953
Silvia Degli-Esposti, MD
Christy Dibble, MD
Nancy Botelho, NP

Gastroenterology Associates
44 West River Street
Providence, RI 02904
274-4800
Samir A. Shah, MD
Evan Cohen, MD
Neil Greenspan, MD
Alyn Adrain, MD
Jeremy Spector, MD
David Schreiber, MD
Brett Kalmowitz, MD

University Medical Group
50 Maude Street
Providence, RI 02908
456-6510
Alan Epstein, MD
Martha Weston Feldmann, MS, RNP
Consultants in Gastroenterology
148 West River Street
Providence, RI 02904
1524 Atwood Avenue - Suite 435
Johnston, RI 02919
421-6306
Joel Spellun, MD
Jay Sorgman, MD
Philip McAndrew, MD
Barbara Rampo, NP

Medical Group of RI
215 Tollgate Road – Suite 201
Warwick, RI 02886
739-7345
Raymond J. Mis, D.O.
Moe Azzouz, MD
Jennette Cronin, NP
37 Washington St.
West Warwick, RI 02893
821-4707
Pedro Barros, MD

University Gastroenterology
1351 South County Trail #220
East Greenwich, RI 02818
845-6100
Thomas P. Mc Mahon, MD
Joseph Pianka, MD

University Medicine Foundation
Rhode Island Hospital Campus
110 Lockwood Street
Providence, RI 02903
444-3575 (Main Office)
Gyorgy Baffy, MD
55 Claverick St.
Providence, RI 02903
444-2536

University Medicine Foundation
593 Eddy Street
Providence, RI 02903
444-3830

Coastal Medical, Inc.
400 Reservoir Avenue
Providence, RI 02907
781-2400
Rinchen-Tzo Emgushov, MD

Glenn Fort, MD
Our Lady of Fatima Hospital
Marian Hall
200 High Services Avenue
North providence, RI 02904
456-3102

Dennis Mikolich, MD
Infectious Diseases
1150 Reservoir Avenue
Suite 103
Cranston, RI 02920
943-8685

University Gastroenterology
33 Staniford Street
Providence, RI 02905
421-8800
Leslie E. Cashel, MD
Thomas E. Sepe, MD
Linda Durand, NP

GI Specialists
45 Wells Street, Suite 103
Westerly, RI 02891
596-6330
Bradford Lavigne, MD
Steven Yolen, MD
Pamela J. Connors, MD
Laryl Reilly, RNP
Barry Ross, MD

University Gastroenterology
1407 South County Trail
Building 4, Suite 410
East Greenwich, RI 02818
886-4040
Angela Fishman, MD
Philip Trupiano, DO
John Cribb, MD
Erik Berthiaume, MD

**HIV/HCV Co-Infection Treatment**

Hepatitis C Clinic
Immunology Center
Miriam Hospital
Fain Bldg. – 2nd floor Suite E
164 Summit Avenue
Providence, RI 02906
793-2928
Lynn Taylor, MD

Thundermist Health Center
383 Arnold Street
Woonsocket, RI 02895
767-4100
Robert Robbio, MD
Grace Accetta, RN

# SUPPORT GROUPS

Roger Williams Medical Center
2nd & 4th Wednesday of each month1st
7:00 - 8:30 p.m.
Ambulatory Surgery Waiting Area
825 Chalkstone Ave.,
Providence, RI 02908
Facilitated by Pastoral Car
Jim Willsey, Chaplain 401-456-2284

Hep C Connection
1-800-522-HEPC or (1-800-522-4372)
(Provides referrals to additional
support groups in the community,
if they exist.)

Women for Sobriety
7:00 p.m., Wednesdays
Providence Center, Room 125
520 Hope St., Providence
1-800-748-1975
(Meetings vary weekly, call
for scheduling.)

# HELPLINES

Centers for Disease Control & Prevention
Hepatitis Information Line
1-888-4HEP-CDC or 1-888-443-7232

American Liver Foundation
1-888-4Hep ABC or 1-888-443-7222
1-800-Go Liver or 1-800-465-4837
1-800-223-0179

Hep C Connection
1800-522HEPC or 1-800-522—4372

Hepatitis Foundation International
1-800-891-0707

National Spanish HIV/AIDS Hotline
(Spanish speaking staff offers general information on HIV/AIDS & Hepatitis)
1-800-344-7432 (8am-2am EST)

National Digestive Diseases Information Clearinghouse
1-800-891-5389

Substance Abuse Treatment Hotline (information and referral for Drug/ Alcohol Treatment)
1-866-252-3784

Alcoholics Anonymous
1-800-439-8860 or 401-438-8860

Hepatitis Helpline
(offers general information on Hepatitis B & C)
1-800-390-1202 (8am–8pm EST)

National Hepatitis Hotline
1800-7008700

Center for Disease Control
1-800-CDC-Shot or
1-800-232-7468

Narcotics Anonymous
401-461-1110 or
1-877-461-1110

# WEBSITES

| | |
|---|---|
| American Liver Foundation | www.liverfoundation.org |
| American Social Health Association | www.ashastd.org |
| Centers for Disease Control and Prevention | www.cdc.gov/hepatitis |
| HCV Advocate | www.hcvadvocate.org |
| Hepatitis B Foundation | www2.hepb.org/hepb/ |
| Hep C Connection | ww.hepc-connection.org |
| Hepatitis C an Epidemic for Anyone | www.epidemic.org |
| Hepatitis C Foundation | www.hepcfoundation.org |
| Hepatitis C Support Project | www.hcvadvocate.org |
| Hepatitis Education Project | ww.scn.org/health/hepatitis/index.htm |
| Hepatitis Foundation International | www.hepfi.org |
| HIV and Hepatitis Treatment Advocates | www.hivandhepatitis.com |
| Immunization Action Coalition | www.immunize.org |
| Latino Organization for Liver Awareness (LOLA) | www.lola-national.org |
| Narcotic Anonymous (NA) | www.na.org |
| National AIDS Treatment Advocacy Project (NATAP) | www.natap.org |
| National Commission on Correctional Health Care | www.nccho.org |
| National Digestive Disease Information Clearinghouse | www.niddk.nih.gov |
| National Institutes of Health | www.niddk.nih.gov |
| National Women's Health Information Center | www.4woman.gov |
| Proyecto de Salud para la Hepatitis C | www.hcvadvocate.org/Oldsite/Spadvocate.htm |
| Rhode Island Department of Health | www.health.ri.gov |

# Substance Abuse Treatment Service Providers

Treatment services are available statewide in a variety of settings, through licensed treatment providers. Modalities include Detoxification, Residential, Outpatient or Intensive Outpatient/Day Treatment, and Narcotic Treatment (i.e., Methadone Maintenance/Detoxification). Most services are covered by health insurance (including Rite Care), and many agencies receive federal or state funding to serve people without insurance coverage – check with individual programs regarding their payment options. Licensed and other related providers are listed below by modality. *Note: All area codes are 401, unless otherwise noted.

For General Information and Treatment Referral, contact the Rhode Island Council on Alcoholism and Other Drug Dependence Helpline at 800-622-7422 or 725-0410.

***All Patient Information is Protected Under Federal Confidentiality Laws***

## DETOXIFICATION SERVICES

**SSTAR (North Kingstown**)
1950 Tower Hill Road
North Kingstown, RI 02852
294-6160 or 294-0419
1-800-RI-SOBER/1-800-747-6237
Jon Brett, Executive Director
Cynthia Adams, Program Director

**Providence Center (Social Setting Detox)**
90 Plain Street
Providence, RI 02905
276-4020
Dale Klatzker, Executive Director

**Butler Hospital (Detoxification and treatment services)**
345 Blackstone Blvd.
Providence, RI 02906
455-6220

**Roger Williams Medical Center (Medical detoxification and treatment referral)**
825 Chalkstone Avenue
Providence, RI 02908
456-6837
456-2363 or 1-800-252-6466
456-6744 Fax Number
Tom Allen, Interim Director

# RESIDENTIAL TREATMENT SERVICES

**Eastman House (Adult women)**
166 Pawtucket Avenue
Pawtucket, RI 02860
722-4644
Susan Wallace, Executive Director

**Corkery House (Adolescent males)**
15 Bakers Pine Road
Richmond, RI 02898
539-3002
Susan Wallace, Executive Director
Dave Sherlock, Residential Program Director

**Caritas Eastman House (Adolescent females)**
70 East Street
Cranston, RI 02920
463-8829
Susan Wallace, Executive Director
Janette Ortiz,
Residential Program Director

**Galilee House (Adult men)**
268 Kingstown Road
Narragansett, RI 02882
789-9390
Jill Lawler, Executive Director
Margrett Plunkett, Clinical Director

**Kent House (Adult men)**
2020 Elmwood Avenue
Warwick, RI 02888
781-2700
Marty Madden,
Residential Program Director
Mary Osborne, Clinical Supervisor

**MAP Alcohol and Drug Rehabilitative Services (Adult men, minority focus)**
66 Burnett Street
Providence, RI 02907
785-0050
William Rose, Executive Director
Paula Trice, Clinical Director

**Phoenix House (Adult men and women)**
P.O. Box 420
Exeter, RI 02822
295-0960
294-7494 Fax Number
Patrick McEneaney, Executive Director
Marie Moore, Clinical Director

**Phoenix Academy at Wallum Lake (Adolescent males)**
P.O. Box 398
Pascoag, RI 02859
568-1770
Patrick McEneaney, Executive Director
Jilie Vander-Schel and Barry Baits
Residential Program Directors

**The Providence Center/Talbot Treatment Center Women's Day Treatment**
90 Plain Street
Providence, RI 02905
528- 0050 Main Office
276-4020 Intake Department- Judy or Karen Chateauneuf
276-4110 Intake Depart Fax Number

276-4600 Tina LaPierre
276-4632 Lynn Mulvey
Dale Klatzker, Executive Director
Elaine Poncelete,
WDT/OP Program Director
Tina LaPierre, WDT Program Manager

**The Providence Center/Talbot Treatment Center Transitional/Long-Term Care (Adult men and women)**
2198 Wallum Lake
Pascoag, RI 02859
568-6670
Dale Klatzker, Executive Director
Margarett Plunkett,LTC Program Director

**SSTARBIRTH (Pregnant/Post-partum women & their children)**
80 East Street
Cranston, RI 02920
463-6001
Nancy Paull, Executive Director
Judy Gomain, Clinical Supervisor
Diane Gouvia, Residential Prgm. Director
765-4040 Main Number

**Tri-Hab – King House (Adult women)**
80 Hamlet Avenue
Woonsocket, RI 02895
766-4740 Sue Cotton
David Spencer, Executive Director

**The Providence Center/Talbot Treatment Centers (Adult men and women)**
90 Plain Street
Providence, RI 02905
528-0050 Main Office
276-4020 Intake Dept. Judy or Karen C.
276- 4110 Intake Dept Fax Number
Dale Klatzker, Executive Director
Cheryl Andrade, Residential Program Director
*30-day re-admit policy

**Tri-Hab – Men's Residential (Adult men)**
79 Asylum Street
Woonsocket, RI 02895
765-4040 Main Number
766-1665 Sandra Celona
658-3757 Fax Number
David Spencer, Executive Director
Beverly Nixon, Clinical Supervisor

**Robert J. Wilson House (Adult men)**
80 Summit Street
Pawtucket, RI 02860
235-7432
Intake x7121
Christian Stephens, CEO
Christine Mattera,
Dual Diagnosis Tx. Director
Al Morin, Residential Program Director

# OUTPATIENT SERVICES

**ADCARE** - Warwick
400 Bald Hill Road
Warwick, RI 02886
732-1500
Roxanne Arakelian, Director

**Eastman House (Adult Services)**
166 Pawtucket Avenue
Pawtucket, RI 02860
722-4644
Susan Wallace, Executive Director

**Child and Family Services of Newport County**
24 School Street
Newport, RI 02840
849-2300
Peter DiBari, Executive Director

**CODAC 1**
1052 Park Avenue
Cranston, RI 02910
461-5056
Michael Rizzi, Executive Director

**CODAC III**
93 Thames Street
Newport, RI 02840
846-4150
Michael Rizzi, Executive Director

**CODAC East Bay**
850 Waterman Avenue
East Providence, RI 02914
434-5999
Michael Rizzi, Executive Director

**CODAC Behavioral Healthcare of Wakefield**
350 Columbia Street
Wakefield, RI 02879
401-792-7048
Peter Letendre, Executive Director

**Community Counseling Center**
160 Beechwood Avenue
Pawtucket, RI 02860
722-5573
Richard LeClerc, Executive Director

**Comprehensive Community Action – Addiction Services**
311 Doric Avenue
Cranston, RI 02910
781-3990
Joanne McGunagle, Executive Director

**Corkery House (Adolescent Services)**
15 Bakers Pine Road
Richmond, RI 02898
539-3002
Susan Wallace, Executive Director
Dave Sherlock, Program Director

**East Bay Mental Health Center – Adams-Farley Counseling Center**
610 Wampanoag Trail
East Providence, RI 02914
246-1195
Administration 437-8844

**Family Resources, Inc.**
245 Main Street
Woonsocket, RI 02895
766-0900
Beneditt Lessing, Executive Director

**Family Services, Inc**.
55 Hope Street
Providence, RI 02906
331-1350
Tammy Conn, Contact Person

**Kent Center *(Also provides specialized women's day treatment)**
50 Health Lane
Warwick, RI 02886
738-4300
David Lauterbach, Contact Person

**Kent House**
2020 Elmwood Avenue
Warwick, RI 02888
781-2700
Mary Osborne, Clinical Supervisor

**MAP Alcohol and Drug Rehabilitation Services (Services for Minorities)**
66 Burnett Street
Providence, RI 02907
331-3537

**Meadows Edge Recovery Center**
580 Ten Rod Road
North Kingstown, RI 02852
294-7240
Dr. Femino

**Mental Health Services of Cranston, Johnston & Northwest RI:**
Counseling and Intervention – Warwick
422 Post Road
Warwick, RI 02888
781-0033
Robert Crossley, Executive Director

**Newport County Community Mental Health Center**
127 Johnnycake Hill Road
Middletown, RI 02842
846-1213
J. Clement Cicilline, Executive Director

**Northern RI Community Mental Health Center**
--21 Peace Street
Providence, RI 02907
521-3300
Christian Stephens, CEO
--36 Bridgeway
Pascoag, RI 02859
--55 Cummings Way
Woonsocket, RI 02895
--Robert J. Wilson House
80 Summit Street, Pawtucket, RI 02907

**Phoenix House/Marathon- Providence**
205 Waterman Avenue
Providence, RI 02926
421-5255
Patrick McEneaney, Executive Director

**Phoenix House/Marathon- Wakefield**
1058 Kingstown Road
Wakefield, RI 02879
783-0782
Patrick McEneaney, Executive Director

**Phoenix House/Marathon- Westerly**
101 Franklin Street
Westerly, RI 02891
348-9995
Patrick McEneaney, Executive Director

**The Providence Center/ Talbot Treatment Center**
520 Hope Street
Providence, RI 02906
Main office 528-0050
276-4504

**The Providence Center/Talbot Treatment Center**
90 Plain Street *(Also provides specialized women's day treatment)
Providence, RI 02907
276-4600

**Robert J. Wilson House**
80 Summit Street
Pawtucket, RI 02860
235-7432
Christian Stephens, President

**Providence Community Action (ProCap)**
***(Also provides specialized women's day treatment and adolescent day treatment)**
662 Hartford Avenue
Providence, RI 02909
272-0660
Frank Corbishley, Executive Director

16 Borinquen Street
Providence, RI 02903
272-1006
Orrie Bryor

**South Shore Mental Health Center – Addictions Program**
4705A Old Post Road, PO Box 899
Charlestown, RI 02813
364-7705
Wm. Michael Johnson, President/CEO

**Tri-Hab Community Counseling**
80 Hamlet Street
Woonsocket, RI 02895
765-4040
David Spencer, Executive Director
Marie Cuhn, Program Director

**Tri-Hab – PACS *(Also provides specialized women's day treatment)**
51 Clay Street
Central Falls, RI 02863
726-8080
David Spencer, Executive Director
Jasmine Dimaio, WDT Program Manager

**Tri-Town Substance Abuse Treatment Services**
1126 Hartford Avenue
Johnston, RI 02919
519-1936
Joseph DiSantis, Executive Director

## NARCOTIC TREATMENT SERVICES
## (including Methadone Maintenance and Methadone Detoxification)

**Addiction Recovery Institute (ARI)-North**
31 North Union Street
Pawtucket, RI 02860
725-2520
Lynn Fitzgerald, Executive Director

**Addiction Recovery Institute (ARI)-South**
205 Helene Road, Suite 102
Warwick, RI 02886
737-4788
Lynn Fitzgerald, Executive Director

**Center for Behavioral Health (CBH)**
985 Plainfield Street
Johnston, RI 02919
946-0650
Greg McWilliams, Executive Director

**Center for Treatment and Recovery**
233 Concord Street
Suite 233
Pawtucket, RI 02860
727-1287
Wendy Looker, Director

**CBH – Westerly**
86 Beach Street
Westerly, RI 02891
596-0969
Greg McWilliams, Executive Director

**CODAC**
1052 Park Avenue
Cranston, RI 02910
461-5056
374-2527 Cell Phone James Carlton
Michael Rizzi, Executive Director
James Carlton, Opioid Services Director

**CODAC East Bay**
850 Waterman Avenue
East Providence, RI 02914
434-5999
Michael Rizzi, Executive Director
Sandy Powers, Clinical Director

**CODAC II**
349 Huntington Avenue
Providence, RI 02909
942-1450
946-1550 Fax Number
Michael Rizzi, Executive Director
Kristine Barrett, Methadone Services Program Director

**CODAC III**
93 Thames Street
Newport, RI 02840
846-4150
374-3780 Cell Phone Linda Hurley
Michael Rizzi, Executive Director
Linda Hurley, Program Director
Laura Levine, Clinical Director

**Discovery House**
**(RI Substance Abuse Treatment, Inc.)**
66 Pavilion Avenue
Providence, RI 02905
461-9110
Sheelah Maoili, Program Manager
780-2360 Fax Number
Tim Dutra, Program Director
Rick Froncillo, Executive Director

**Discovery House- West Warwick**
88 West Warwick Avenue
West Warwick, RI 02893
821-8866
Tim Dutra, Executive Director
Ann-Marie Reid-Richardson, Program Manager

**Discovery House – Woonsocket**
1625 Diamond Hill Road
Woonsocket, RI 02895
762-1511
Rick Froncillo, Executive Director

**Metro Treatment**
160 Narragansett Avenue
Providence, RI 02907
941-4488
Kathrine Brousseau, Clinical Director

**VA Hospital**
830 Chalkstone Avenue
Providence, RI 02908
273-7100 ext. 4246
Christopher Morgan

# TREATMENT SERVICES FOR PROBLEM GAMBLERS

**RI Gambling Treatment Program (RI Hospital/Lifespan)**
Bayside Medical Building
235 Plain Street, Suite 501
Providence, RI 02905
277-0707
Bob Breen, Ph.D

**Satellite**: Greenwich Medical Center
Building 2, Suite 210
1351 South County Trail
East Greenwich, RI 02818
277-0707
Bob Breen, Ph.D

**Problem Gambling Recovery Program- CODAC**
Michael Rizzi, Executive Director
1052 Park Avenue
Cranston, RI 02910
461-5056

**Problem Gambling Recovery Program Satellites:**

39 Huntington Avenue
Providence, RI 02910
942-1450

93 Thames Street
Newport, RI 02840
846-4150

850 Waterman Avenue
East Providence, RI 02914
434-4999

# HOSPITAL-BASED SERVICES

**Butler Hospital (Detoxification and treatment services)**
345 Blackstone Blvd.
Providence, RI 02906
455-6220

**Veteran's Administration Medical Center***
830 Chalkstone Avenue
Providence, RI 02908
*457-3083 or 457-3393: Mon-Fri, 8AM-4PM-Ask for "Interim Care"; Evenings and Weekends-Ask for Psychiatrist on call in Acute Care Area.

**Roger Williams Medical Center**
(Medical detoxification and treatment referral)
825 Chalkstone Avenue
Providence, RI 02908
456-2363 or 1-800-252-6466
456-6744 Fax Number Donna Peterson
x 6837 Interim Director, Tom Allen

**Women and Infants' Hospital-Project Link (outpatient services for pregnant women and women of childbearing age)**
134 Thurbers Avenue, Suite 212
Providence, RI 02905
453-7618
Noreen Mattis, Executive Director
Mailing Address:
101 Dudley Street
Providence, RI 02905

# HARM REDUCTION

**Harm Reduction and Substance Abuse Treatment for People Living with HIV & HCV**

Although the number of cases of acute hepatitis C among injecting-drug users has declined dramatically since 1989, both incidence and prevalence of HCV infection remain high in this group. Injecting-drug use currently accounts for most HCV transmission in the United States, and has accounted for a substantial proportion of HCV infections during past decades. Many persons with chronic HCV infection might have acquired their infection 20-30 years ago as a result of limited or occasional illegal drug injecting. Injecting-drug use leads to HCV transmission in a manner similar to that for other blood borne pathogens (i.e., through transfer of HCV-infected blood by sharing syringes and needles either directly or through contamination of drug preparation equipment) However, HCV infection is acquired more rapidly after initiation of injecting than other viral infections (i.e., hepatitis B virus {HBV} and HIV), and rates of HCV infection among young injecting-drug users are four times higher than rates of HIV infection. After 5 years of injecting, as many as 90% of users are infected with HCV. More rapid acquisition of HCV infection compared with other viral infections among injecting-drug users is likely caused by high prevalence of chronic HCV infection among injecting-drug users, which results in a greater likelihood of exposure to an HCV-infected person.

With this in mind, Harm Reduction has emerged over the last decade in the United States as the model for intervening with substance users. Harm reduction offers an alternative approach to the moral (zero tolerance), criminal justice model (the war on drugs) and the biochemical (sickness and disease) model that have dominated drug policy and drug treatment for the last quarter of a century. Whether harm minimization, risk reduction and/or harm elimination are the terms utilized, all are captured within the concept of harm reduction.

Substance abuse/use prevention and treatment and harm reduction programs such as syringe exchange become important public health measures. While immunization against HCV is not available, providing opportunity for counseling on how to reduce risk for becoming infected needs to be included in substance use prevention and drug treatment settings. Other public education aimed at risk behaviors such as tattooing and body can reduce or eliminate potential risk for HCV transmission.

# RI Harm Reduction - ENCORE

E -Education on HIV & Viral Hepatitis Prevention
N - Needle Exchange to reduce the risk of transmitting HIV, Hepatitis C Virus (HCV) and other communicable diseases
C - Counseling on reducing risks, HIV testing, following through on medical care and substance abuse treatment options
O - Outreach into the community to help identify clients from the ENCORE Program.
RE - Referral to agencies and programs on request from the clients.

ENCORE's mission is to prevent the transmission of HIV, HCV and other blood borne pathogens among injecting drug users through a variety of harm reduction tools i.e. education, safe syringe exchange, condom distribution, counseling, outreach and referral to drug treatment facilities and other social service agencies.

The guiding principle of ENCORE, the Rhode Island syringe exchange program, is based on the theory of **HARM REDUCTION**:

> **HARM REDUCTION** is a set of strategies and tactics that encourage injecting drug users to reduce the harm done to themselves and their communities by licit and illicit drug use. By allowing injecting drug users access to the tools to become healthier, we recognize the competency of their efforts to protect themselves, their loved ones, and their communities.

**HARM REDUCTION** practitioners recognize any incremental behavior change as positive. If all an injecting drug user can do to protect their health during any given day is use an alcohol swab before injection, their competency in doing that is recognized and supported within this model.

While not using injecting drugs is the best way to prevent HIV and HCV infection, each health-related step towards that goal will be assisted in any way possible.

**What is the ENCORE or syringe exchange/harm reduction program?**

**ENCORE (Education, Needle Exchange, Counseling, Outreach and REferral)**
ENCORE is an anonymous program of the Rhode Island Department of Health, coordinated by AIDS Care Ocean State. The purpose of the ENCORE program is to prevent HIV, Hepatitis C and other blood borne diseases by giving people harm reduction tools to lower their risk of infection:

- clean syringes;
- bleach with information on how to clean syringes;
- alcohol swabs, cookers and cotton with information on skin care;
- condoms and other safer sex materials and how to use them; and
- referrals to drug treatment, social services and medical care.

Other services available at ENCORE sites include:

- Anonymous HIV testing
- Clothing Bank

- Hot coffee and/or snacks (when available)

The rules of the ENCORE program are simple. Clients must bring in syringes to dispose of in order to be eligible to receive sterile equipment. Clients are invited to utilize the quantity of materials that is useful to them. This means that some clients attend sites frequently and take small quantities of syringes and other materials, others come infrequently and take disposal containers and large numbers of syringes and other materials. Anyone can go to an ENCORE site for other harm reduction tools such as condoms, cookers and alcohol swabs.

**ENCORE Sites**
AIDS Care Ocean State
605 Elmwood Avenue
Providence, RI 02907
781-0665

- Monday through Friday 9:00 – 5:00 pm at 605 Elmwood Avenue, Providence.
- Tuesday and Thursday, 6:00 - 8:00 pm, at 605 Elmwood Avenue, Providence.

A mobile van is available at the following sites:

- Woonsocket (East School Street)
- Newport (Broadway & Martin Luther King Center)

For more information contact Eli Reyes at 401/781-0665 or 401/255-8563 or email him at elir@aidscareos.org. Information is also available by calling the Health Department at 222-2320. Updated site information is available 24 hours a day at http://www.aidscareos.org/encore/encore.htm.

Finally professional education about the risk of HCV from the exposures to blood with health care workers, people working in emergency/rescue settings, detox, substance abuse treatment and schools are important. Adopting and implementing policies on blood borne pathogen exposure and universal precautions are familiar to these settings because of HIV prevention efforts. Emphasizing that the policies and education includes all blood borne pathogens needs to be reinforced because of the potential for greater risk from HCV.

In Rhode Island, there is a course offered through Project REACH, the HIV capacity building program that bridges the gap for professionals on HIV and HCV. ***Making the Connection*** is a multi-discipline, two-day training for people working in the fields of HIV and substance abuse. Topics include HIV and HCV among substance users as well as other infectious disease such as TB and STDs. Any one interested in this training can access the REACH training catalog at the Rhode Island Community Planning Group web site at ricpg.org.

# Viral Hepatitis

## Centers for Disease Control and Prevention
## Center for Infectious Diseases


**Hepatitis A:** is a liver disease caused by the hepatitis A virus (HAV). Hepatitis A can affect anyone. In the United States, hepatitis A can occur in situations ranging from isolated cases of disease to widespread epidemics.


**Hepatitis B:** is a serious disease caused by a virus that attacks the liver. The virus, which is called hepatitis B virus (HBV), can cause lifelong infection, cirrhosis (scarring) of the liver, liver cancer, liver failure, and death.


**Hepatitis C:** is a liver disease caused by the hepatitis C virus (HCV), which is found in the blood of persons who have the disease. HCV is spread by contact with the blood of an infected person.


**Hepatitis D:** is a liver disease caused by the hepatitis D virus (HDV), a defective virus that needs the hepatitis B virus to exist. Hepatitis D virus (HDV) is found in the blood of persons infected with the virus.


**Hepatitis E:** is a liver disease caused by the hepatitis E virus (HEV) transmitted in much the same way as hepatitis A virus. Hepatitis E, however, does not occur often in the United States.

# Hepatitis A Virus Fact Sheet

| | | |
|---|---|---|
| **SIGNS & SYMPTOMS** | Adults will have signs and symptoms more often than children. | |
| | • Jaundice<br>• Fatigue<br>• Abdominal pain<br>• Loss of appetite | • Nausea<br>• Diarrhea<br>• Fever |
| **CAUSE** | • Hepatitis A virus (HAV) | |
| **LONG-TERM EFFECTS** | • There is no chronic (long-term) infection.<br>• Once you have had hepatitis A you cannot get it again.<br>• About 15% of people infected with HAV will have prolonged or relapsing symptoms over a 6-9 month period. | |
| **TRANSMISSION** | • HAV is found in the stool (feces) of persons with hepatitis A.<br>• HAV is usually spread from person to person by putting something in the mouth (even though it may look clean) that has been contaminated with the stool of a person with hepatitis A. | |
| **PERSONS AT RISK OF INFECTION** | • Household contacts of infected persons<br>• Sex contacts of infected persons<br>• Persons, especially children, living in areas with increased rates of hepatitis A during the baseline period from 1987-1997. (view map)<br>• Persons traveling to countries where hepatitis A is common (view map)<br>• Men who have sex with men<br>• Injecting and non-injecting drug users | |
| **VACCINE RECOMMENDATIONS** | Vaccine is recommended for the following persons 2 years of age and older:<br>• Travelers to areas with increased rates of hepatitis A (view map)<br>• Men who have sex with men<br>• Injecting and non-injecting drug users<br>• Persons with clotting-factor disorders (e.g. hemophilia)<br>• Persons with chronic liver disease<br>• Children living in areas with increased rates of hepatitis A during the baseline period from 1987-1997. (view map) | |

# Hepatitis B Virus – Fact Sheet

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|---|---|---|
| **SIGNS & SYMPTOMS** | About 30% of persons have no signs or symptoms.<br>Signs and symptoms are less common in children than adults. | |
| | • Jaundice<br>• Fatigue<br>• Abdominal pain | • Loss of appetite<br>• Nausea, vomiting<br>• Joint pain |
| **CAUSE** | • Hepatitis B virus (HBV) | |
| **LONG-TERM EFFECTS WITHOUT VACCINATION** | Chronic infection occurs in:<br>• 90% of infants infected at birth<br>• 30% of children infected at age 1 - 5 years<br>• 6% of persons infected after age 5 years<br>Death from chronic liver disease occurs in:<br>• 15-25% of chronically infected persons | |
| **TRANSMISSION** | • Occurs when blood or body fluids from an infected person enters the body of a person who is not immune.<br>HBV is spread through having sex with an infected person without using a condom (the efficacy of latex condoms in preventing infection with HBV is unknown, but their proper use may reduce transmission), by sharing drugs, needles, or "works" when "shooting" drugs, through needlesticks or sharps exposures on the job, or from an infected mother to her baby during birth. Persons at risk for HBV infection might also be at risk for infection with hepatitis C virus (HCV) or HIV. | |
| **RISK GROUPS** | • Persons with multiple sex partners or diagnosis of a sexually transmitted disease<br>• Men who have sex with men<br>• Sex contacts of<br>• infected persons<br>• Injection drug users<br>• Household contacts of chronically infected persons | • Infants born to infected mothers<br>• Infants/children of immigrants from areas with high rates of HBV infection (view map)<br>• Health care and public safety workers<br>• Hemodialysis patients |
| **PREVENTION** | • Hepatitis B vaccine is the best protection.<br>• If you are having sex, but not with one steady partner, use latex condoms correctly and every time you have sex. The efficacy of latex condoms in preventing infection with HBV is unknown, but their proper use may reduce transmission.<br>• If you are pregnant, you should get a blood test for hepatitis B; Infants born to HBV-infected mothers should be given HBIG (hepatitis B | |

| | |
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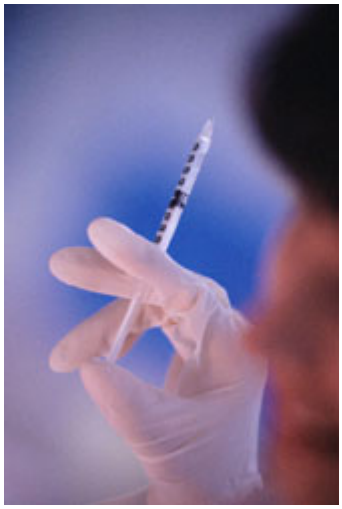
| | immune globulin) and vaccine within 12 hours after birth.<br>• Do not shoot drugs; if you shoot drugs, stop and get into a treatment program; if you can't stop, never share drugs, needles, syringes, water, or "works", and get vaccinated against hepatitis A and B.<br>• Do not share personal care items that might have blood on them (razors, toothbrushes).<br>• Consider the risks if you are thinking about getting a tattoo or body piercing. You might get infected if the tools have someone else's blood on them or if the artist or piercer does not follow good health practices.<br>• If you have or had hepatitis B, do not donate blood, organs, or tissue.<br>• If you are a health care or public safety worker, get vaccinated against hepatitis B, and always follow routine barrier precautions and safely handle needles and other sharps. |
| **VACCINE RECOMMENDATIONS** | • Hepatitis B vaccine available since 1982<br>• Routine vaccination of 0-18 year olds<br>• Vaccination of risk groups of all ages. |
| **TREATMENT & MEDICAL MANAGEMENT** | • HBV infected persons should be evaluated by their doctor for liver disease.<br>• Adefovir dipivoxil, alpha interferon, and lamivudine are three drugs licensed for the treatment of persons with chronic hepatitis B.<br>• Pregnant women should not use these drugs.<br>• Drinking alcohol can make your liver disease worse. |
| **TRENDS & STATISTICS** | • Number of new infections per year has declined from an average of 260,000 in the 1980s to about 73,000 in 2003.<br>• Highest rate of disease occurs in 20-49-year-olds.<br>• Greatest decline has happened among children and adolescents due to routine hepatitis B vaccination.<br>• Estimated 1.25 million chronically infected Americans, of whom 20-30% acquired their infection in childhood. |

# Hepatitis B Vaccine – Fact Sheet

**First Anti-cancer Vaccine**



- Hepatitis B vaccine prevents hepatitis B disease and its serious consequences like hepatocellular carcinoma (liver cancer). Therefore, this is the first anti-cancer vaccine.

**Safe and Effective**

- Medical, scientific and public health communities strongly endorse using hepatitis B vaccine as a safe and effective way to prevent disease and death.
- Scientific data show that hepatitis B vaccines are very safe for infants, children, and adults.
- There is **no confirmed evidence**, which indicates that hepatitis B vaccine can cause chronic illnesses.
- To assure a high standard of safety with vaccines, several federal agencies continually assess and research possible or potential health effects that could be associated with vaccines.

**Vaccine Schedule**

- National Immunization Program, CDC 2005 recommends that all infants should receive the first dose of HepB vaccine soon after birth and before hospital discharge; the first dose may also be administered by age 2 months if the mother is hepatitis B surface antigen (HbsAg) negative. The second dose should be administered at least 4 weeks after the first dose, except for combination vaccines, which cannot be administered before 6 weeks. The third dose should be given at least 16 weeks after the first dose and at least 8 weeks after the second dose.
- If the vaccination series is interrupted after the first dose, the second dose should be administered as soon as possible. The second and third doses should be separated by an interval of at least 2 months. If only the third dose is delayed, it should be administered when convenient.

**Booster Doses**

- Current data show that vaccine-induced hepatitis B surface antibody (anti-HBs) levels may decline over time; however, immune memory (anamnestic anti-HBs response) remains intact indefinitely following immunization. Persons with declining antibody levels are still protected against clinical illness and chronic disease.
- For health care workers with normal immune status who have demonstrated an anti-HBs response following vaccination, booster doses of vaccine are not recommended nor is periodic anti-HBs testing.

**Post-vaccination Testing**

- After routine vaccination of infants, children, adolescents, or adults post-vaccination testing for adequate antibody response is not necessary.
- Post-vaccination testing IS recommended for persons whose medical management will depend on knowledge of their immune status.

This includes persons who:

- are immunocompromised (e.g., hemodialysis patients)
- received the vaccine in the buttock
- are infants born to HBsAg (hepatitis B surface antigen)-positive mothers
- are healthcare workers who have contact with blood
- are sex partners of persons with chronic hepatitis B virus infection
- Post-vaccination testing should be completed 1-2 months after the third vaccine dose for results to be meaningful. A protective antibody response is 10 or more milliinternational units (>=10mIU/mL).

**Adverse Events**

- Case reports of unusual illnesses following vaccines are most often related to other causes and not related to a vaccine. Whenever large number of vaccines are given, some adverse events will occur coincidentally after vaccination and be falsely attributed to the vaccine.
- Anyone believing they have had a possible reaction or adverse health effect from a vaccine should report it to their health care provider. The Vaccine Adverse Events Reporting System (1-800-822-7967) receives reports from health care providers and others about vaccine side effects.

# Hepatitis C Virus – Fact Sheet

**SIGNS & SYMPTOMS**

80% of persons have no signs or symptoms.

- Jaundice
- Fatigue
- Dark urine
- Abdominal pain
- Loss of appetite
- Nausea

**CAUSE**

- Hepatitis C virus (HCV)

**LONG-TERM EFFECTS**

- Chronic infection: 55%-85% of infected persons
- Chronic liver disease: 70% of chronically infected persons
- Deaths from chronic liver disease: 1%-5% of infected persons may die
- Leading indication for liver transplant

**TRANSMISSION**

- Occurs when blood or body fluids from an infected person enters the body of a person who is not infected.
- HCV is spread through sharing needles or "works" when "shooting" drugs, through needlesticks or sharps exposures on the job, or from an infected mother to her baby during birth.

Recommendations for testing based on risk for HCV infection

Persons at risk for HCV infection might also be at risk for infection with hepatitis B virus (HBV) or HIV.

Recommendations for Testing Based on Risk for HCV Infection

| PERSONS | RISK OF INFECTION | TESTING RECOMMENDED? |
|---|---|---|
| Injecting drug users | High | Yes |
| Recipients of clotting factors made before 1987 | High | Yes |
| Hemodialysis patients | Intermediate | Yes |
| Recipients of blood and/or solid organs before 1992 | Intermediate | Yes |
| People with undiagnosed liver problems | Intermediate | Yes |
| Infants born to infected mothers | Intermediate | After 12-18 mos. old |
| Healthcare/public safety workers | Low | Only after known exposure |
| People having sex with multiple partners | Low | No* |
| People having sex with an infected steady partner | Low | No* |

*Anyone who wants to get tested should ask their doctor.

| | |
|---|---|
| **PREVENTION** | • There is no vaccine to prevent hepatitis C.<br>• Do not shoot drugs; if you shoot drugs, stop and get into a treatment program; if you can't stop, never share needles, syringes, water, or "works", and get vaccinated against hepatitis A & B.<br>• Do not share personal care items that might have blood on them (razors, toothbrushes).<br>• If you are a health care or public safety worker, always follow routine barrier precautions and safely handle needles and other sharps; get vaccinated against hepatitis B.<br>• Consider the risks if you are thinking about getting a tattoo or body piercing. You might get infected if the tools have someone else's blood on them or if the artist or piercer does not follow good health practices.<br>• HCV can be spread by sex, but this is rare. If you are having sex with more than one steady sex partner, use latex condoms* correctly and every time to prevent the spread of sexually transmitted diseases. You should also get vaccinated against hepatitis B.<br>• If you are HCV positive, do not donate blood, organs, or tissue. |
| **TREATMENT & MEDICAL MANAGEMENT** | • HCV positive persons should be evaluated by their doctor for liver disease.<br>• Interferon and ribavirin are two drugs licensed for the treatment of persons with chronic hepatitis C.<br>• Interferon can be taken alone or in combination with ribavirin. Combination therapy, using pegylated interferon and ribavirin, is currently the treatment of choice.<br>• Combination therapy can get rid of the virus in up to 5 out of 10 persons for genotype 1 and in up to 8 out of 10 persons for genotype 2 and 3.<br>• Drinking alcohol can make your liver disease worse. |
| **STATISTICS & TRENDS** | • Number of new infections per year has declined from an average of 240,000 in the 1980s to about 25,000 in 2001.<br>• Most infections are due to illegal injection drug use.<br>• Transfusion-associated cases occurred prior to blood donor screening; now occurs in less than one per million transfused unit of blood.<br>• Estimated 3.9 million (1.8%) Americans have been infected with HCV, of whom 2.7 million are chronically infected. |

# Hepatitis D Virus – Fact Sheet

| | | |
|---|---|---|
| **SIGNS & SYMPTOMS** | | |
| | • jaundice<br>• fatigue<br>• abdominal pain<br>• loss of appetite | • nausea, vomiting<br>• joint pain<br>• dark (tea colored) urine |
| **CAUSE** | • Hepatitis D virus (HDV) | |
| **LONG-TERM EFFECTS WITHOUT VACCINATION** | • HDV can be acquired either as<br>  o a co-infection (occurs simultaneously) with hepatitis B virus (HBV) or<br>  o as a superinfection in persons with existing chronic HBV infection.<br>• HBV-HDV co-infection:<br>  o may have more severe acute disease and a higher risk (2%-20%) of developing acute liver failure compared with those infected with HBV alone<br>• HBV-HDV superinfection<br>  o chronic HBV carriers who acquire HDV superinfection usually develop chronic HDV infection<br>  ▪ progression to cirrhosis is believed to be more common with HBV/HDV chronic infections | |
| **TRANSMISSION** | • Occurs when blood or body fluids from an infected person enters the body of a person who is not immune.<br>• HBV is spread through having sex with an infected person without using a condom (the efficacy of latex condoms in preventing infection with HBV is unknown, but their proper use may reduce transmission);<br>• By sharing drugs, needles, or "works" when "shooting" drugs;<br>• Through needlesticks or sharps exposures on the job; or<br>• From an infected mother to her baby during birth. | |
| **RISK GROUPS** | • Injection drug users<br>• Men who have sex with men<br>• Hemodialysis patients<br>• Sex contacts of infected persons | • Health care and public safety workers<br>• Infants born to infected mothers<br>(very rare) |
| **PREVENTION** | • Hepatitis B vaccination<br>• HBV-HDV coinfection<br>  o pre- or post-exposure prophylaxis (hepatitis B immune globulin or vaccine) to prevent HBV infection<br>• HBV-HDV superinfection<br>  o education to reduce risk behaviors among persons with chronic HBV infection | |
| **VACCINE RECOMMENDATIONS** | • Hepatitis B vaccine should be given to prevent HBV/HDV co-infection | |
| **TREATMENT & MEDICAL MANAGEMENT** | • Acute HDV infection<br>  o Supportive care | |

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| | • Chronic HDV infection<br>  o interferon-alfa<br>  o liver transplant |
| **TRENDS & STATISTICS** | • Routine surveillance data are not available. |

# Hepatitis E Virus – Fact Sheet

| | | |
|---|---|---|
| **SIGNS & SYMPTOMS** | Highest attack rate among persons aged 15-40 years | |
| | • jaundice<br>• fatigue<br>• abdominal pain | • loss of appetite<br>• nausea, vomiting<br>• dark (tea colored) urine |
| **CAUSE** | • Hepatitis E virus (HEV) | |
| **LONG-TERM EFFECTS WITHOUT VACCINATION** | • There is no chronic (long-term) infection<br>• Hepatitis E is more severe among pregnant women, especially in third trimester | |
| **TRANSMISSION** | • HEV is found in the stool (feces) of persons and animals with hepatitis E.<br>• HEV is spread by eating or drinking contaminated food or water.<br>• Transmission from person to person occurs less commonly than with hepatitis A virus<br>• Most outbreaks in developing countries have been associated with contaminated drinking water. | |
| **RISK GROUPS** | • Travelers to developing countries, particularly in South Asia and North Africa | • Rare cases have occurred in the United States among persons with no history of travel to endemic countries |
| **PREVENTION** | • Always wash your hands with soap and water after using the bathroom, changing a diaper, and before preparing and eating food<br>• Avoid drinking water (and beverages with ice) of unknown purity, uncooked shellfish, and uncooked fruits or vegetables that are not peeled or prepared by the traveler. | |
| **TREATMENT & MEDICAL MANAGEMENT** | • Treatment is supportive | |
| **TRENDS & STATISTICS** | • Hepatitis E remains uncommon in the United States. Routine surveillance data are not available. | |

# HIV & HCV COINFECTION

HIV, the human immunodeficiency virus is a virus that causes acquired immunodeficiency syndrome (AIDS).

HIV and HCV (Hepatitis C Virus) share an important mode of transmission: both viruses are blood borne pathogens and are transmitted by blood-to-blood contact. Because of this, professionals working in HIV and HCV prevention share a concern for the risk behaviors associated with injecting drug use (IDU) such as syringe sharing. While it is generally accepted that bleaching syringes will sufficiently clean syringes of HIV, this has not been proven to be the case with HCV. This has resulted in harm reduction programs promoting a total abstinence of any type of paraphernalia sharing including syringes and works such as cookers and cotton. Syringe exchange clients are now being told to use a new syringe every time they inject rather than to clean them.

Presently HIV and HCV are both tested for in the blood supply. This means that the public can be assured that blood transfusions were without HIV after 1985. HCV testing in the blood supply started did not start until 1990. In both cases, there are people who became infected with a virus from transfusions, transplants and other blood products before testing of the blood supply began. It is estimated that 4% of people living with HCV were previously infected from transfusions and blood products. This is not the case with HIV. People infected with HIV from transfusions, transplants and other blood products before testing of the blood supply was significantly less and in many cases are not longer living.

The effect of co-infection with HIV and HCV is not well understood. It is estimated that up to 40% of people infected with HIV are also infected with HCV. Many co-infected people have the additional public health issues of substance abuse and histories of incarceration, which complicate their access to services and adherence to consistent treatment.

**Treating HIV in People Living with HCV**

The United Public Health Service and Infectious Disease Society of America recommend that all HIV infected people be tested for HCV. It is generally recommended that HIV be under control or treated first before treating HCV. The good news is that HIV can be successfully treated in individuals co-infected with HIV and HCV.

It appears that people infected with HIV and HCV may have more rapid progression of their liver disease. Having HCV may increase the incidence of hepatotoxicity or liver damage from HIV treatments therapies. The adverse side effects of HIV medical therapies may be more severe and accelerate the distress on already impaired liver function. Most people with HCV can tolerate HIV medications as long as they are closely monitored for potential liver toxicity. While the potential for HIV medications to produce liver damage is very real as demonstrated with an increase in liver enzyme leveling and HCV viral load, these laboratory results will usually stabilize over time. HIV medications do not seem to have a direct effect on HCV. However, some experts believe that when HIV is under control, HCV disease progression is slowed. *

On the other hand, it is unclear if HCV makes HIV worse. The introduction of combination antiretroviral therapy has greatly improved and extended the life for many people living with HIV. The majority of studies have not been able to correlate a more aggressive HIV disease progression to being infected with HCV.

**Treating HCV in the People Living with HIV**

Individuals with HIV who have been diagnosed with HCV should be evaluated and considered for HCV treatment. The same treatment guidelines for treating HCV can generally be applied to people living with HIV. However, HIV positive individuals with CD4 counts of less than 200, or a concurrent opportunistic illness, are not considered good candidates for HCV treatment, until the CD4 count goes up and/or the opportunistic illness is treated.

Studies have shown that people living with HIV and HCV will have similar response rates to HCV treatment as HCV positive individuals without HIV. Patients should be monitored closely for possible side effects associated with interferon and ribavirin.

Support groups for co-infected individuals are highly recommended due to the emotional complexities of living with these two life-threatening diseases. Additionally, support groups can be a good resource for information sharing since there is so much misinformation regarding these two diseases. *

*Adapted from Hepatitis C Support Project, San Francisco. HIV/HCV Coinfection, What you need to know. HCV Advocate. August 2001;Version 1.1; Recommendations for Prevention and Control of Hepatitis C Virus (HCV) Infection and HCV-Related Chronic Disease October 16, 1998 / 47(RR19): 1-39

# FREQUENTLY ASKED QUESTIONS

## Hepatitis A Virus

*What is hepatitis A?*
Hepatitis A is a liver disease caused by hepatitis A virus.

*How is hepatitis A virus transmitted?*
Hepatitis A virus is spread from person to person by putting something in the mouth that has been contaminated with the stool of a person with hepatitis A. This type of transmission is called "fecal-oral." For this reason, the virus is more easily spread in areas where there are poor sanitary conditions or where good personal hygiene is not observed.

Most infections result from contact with a household member or sex partner who has hepatitis A. Casual contact, as in the usual office, factory, or school setting, does not spread the virus.

*What are the signs and symptoms of hepatitis A?*
Persons with hepatitis A virus infection may not have any signs or symptoms of the disease. Older persons are more likely to have symptoms than children. If symptoms are present, they usually occur abruptly and may include fever, tiredness, loss of appetite, nausea, abdominal discomfort, dark urine, and jaundice (yellowing of the skin and eyes). Symptoms usually last less than 2 months; a few persons are ill for as long as 6 months. The average incubation period for hepatitis A is 28 days (range: 15–50 days).

*How do you know if you have hepatitis A?*
A blood test (IgM anti-HAV) is needed to diagnose hepatitis A. Talk to your doctor or someone from your local health department if you suspect that you have been exposed to hepatitis A or any type of viral hepatitis.

*How can you prevent hepatitis A?*
Always wash your hands after using the bathroom, changing a diaper, or before preparing or eating food.

Two products are used to prevent hepatitis A virus infection: immune globulin and hepatitis A vaccine.

1. Immune globulin is a preparation of antibodies that can be given before exposure for short-term protection against hepatitis A and for persons who have already been exposed to hepatitis A virus. Immune globulin must be given within 2 weeks after exposure to hepatitis A virus for maximum protection.
2. Hepatitis A vaccine has been licensed in the United States for use in persons 2 years of age and older. The vaccine is recommended (before exposure to hepatitis A virus) for

persons who are more likely to get hepatitis A virus infection or is more likely to get seriously ill if they do get hepatitis A. The vaccines currently licensed in the United States are HAVRIX® (manufactured by GlaxoSmithKline) and VAQTA® (manufactured by Merck & Co., Inc).

## HEPATITIS A VACCINE AND IMMUNE GLOBULIN

### Hepatitis A Vaccine

*What are the dosages and schedules for hepatitis A vaccines?*

Recommended dosages of HAVRIX®[1]

| Vaccinee's age (years) | Dose (EL.U.)[2] | Volume (mL) | No. doses | Schedule (mos.)[3] |
|---|---|---|---|---|
| 2-18 | 720 | 0.5 | 2 | 0,6-12 |
| >18 | 1,440 | 1.0 | 2 | 0,6-12 |

Recommended dosages of VAQTA®[1]

| Vaccinee's age (years) | Dose(U)[2] | Volume (mL) | No. doses | Schedule (mos)[3] |
|---|---|---|---|---|
| 2-18 | 25 | 0.5 | 2 | 0,6-18 |
| >18 | 50 | 1.0 | 2 | 0,6-12 |

[1] Hepatitis A vaccine, inactivated, Merck & Co., Inc.
[2] Units.
[3] 0 months represents timing of the initial dose; subsequent numbers represent months after the initial dose.

*Can a patient receive the first dose of hepatitis A vaccine from one manufacturer and the second (last) dose from another manufacturer?*
Yes. Although studies have not been done to look at this issue, there is no reason to believe that this would be a problem.

*What should be done if the second (last) dose of hepatitis A vaccine is delayed?*
The second dose should be administered as soon as possible. There is no need to repeat the first dose.

*Can other vaccines be given at the same time that hepatitis A vaccine is given?*
Yes. Hepatitis B, diphtheria, poliovirus (oral and inactivated), tetanus, oral typhoid, cholera, Japanese encephalitis, rabies, yellow fever vaccine or immune globulin can be given at the same time that hepatitis A vaccine is given, but at a different injection site.

*Is hepatitis A vaccine safe?*
Yes, hepatitis A vaccine has an excellent safety profile. No serious

adverse events have been attributed definitively to hepatitis A vaccine. Soreness at the injection site is the most frequently reported side effect.

Any adverse event suspected to be associated with hepatitis A vaccination should be reported to the Vaccine Adverse Events Reporting System (VAERS). VAERS forms can be obtained by calling 1-800-822-7967.

*How are hepatitis A vaccines made?*
There is no live virus in hepatitis A vaccines. The virus is inactivated during production of the vaccines, similar to Salk-type inactivated polio vaccine.

*How long does hepatitis A vaccine protect you?*
Although data on long-term protection are limited, estimates based on modeling techniques suggest that protection will last for at least 20 years.

*When are persons protected after receiving hepatitis A vaccine?*
Protection against hepatitis A begins four weeks after the first dose of hepatitis A vaccine.

*Can hepatitis A vaccine be given **after** exposure to hepatitis A virus?*
No, hepatitis A vaccine is not licensed for use after exposure to hepatitis A virus. In this situation, immune globulin should be used.

*Should pre-vaccination testing be done?*
Pre-vaccination testing is done only in specific instances to control cost (e.g., persons who were likely to have had hepatitis A in the past). This includes persons who were born in countries with high levels of hepatitis A virus infection, elderly persons, and persons who have clotting factor disorders and may have received factor concentrates in the past.

*Should post-vaccination testing be done?*
No.

*Can hepatitis A vaccine be given during pregnancy or lactation?*
We don't know for sure, but because vaccine is produced from inactivated hepatitis A virus, the theoretical risk to the developing fetus is expected to be low. The risk associated with vaccination, however, should be weighed against the risk for hepatitis A in women who may be at high risk for exposure to hepatitis A virus.

*Can hepatitis A vaccine be given to immunocompromised persons? (e.g., persons on hemodialysis or persons with HIV/AIDS)*
Yes.

*What is Twinrix®?*

It is a combined hepatitis A and hepatitis B vaccine for use in persons

aged 18 years and older. Primary vaccination consists of three doses, given on a 0-, 1-, and 6-month schedule, the same schedule as that used for hepatitis B vaccine alone.

### Immune Globulin

*What is immune globulin?*
Immune globulin is a preparation of antibodies that can be given before exposure for short-term protection against hepatitis A and for persons who have already been exposed to hepatitis A virus. Immune globulin must be given within 2 weeks after exposure to hepatitis A virus for maximum protection.

*Is immune globulin safe?*
Yes. No instance of transmission of HIV (the virus that causes AIDS) or other viruses has been observed with the use of immune globulin administered by the intramuscular route. Immune globulin can be administered during pregnancy and breast-feeding.

## WHO SHOULD GET VACCINATED AGAINST HEPATITIS A?

Hepatitis A vaccination provides protection before one is exposed to hepatitis A virus. Hepatitis A vaccination is recommended for the following groups who are at increased risk for infection and for any person wishing to obtain immunity.

*Persons traveling to or working in countries that have high or intermediate rates of hepatitis A.*
All susceptible persons traveling to or working in countries that have high or intermediate rates of hepatitis A virus should be vaccinated or receive immune globulin before traveling. Persons from developed countries who travel to developing countries are at high risk for hepatitis A. Such persons include tourists, military personnel, missionaries, and others who work or study abroad in countries that have high or intermediate levels of hepatitis A. The risk for hepatitis A exists even for travelers to urban areas, those who stay in luxury hotels, and those who report that they have good hygiene and that they are careful about what they drink and eat.

*Children in states, counties, and communities where rates of hepatitis A were/are at least twice the national average during the baseline period of 1987-1997.*
Children living in states, counties, and communities where rates of hepatitis A are at least twice the national average (≥ 20 cases/1000,000) in baseline period should be routinely vaccinated beginning at 2 years of age. High rates of hepatitis A have been found in these populations, both in urban and rural settings. In addition, to effectively prevent epidemics of hepatitis A, vaccination of previously unvaccinated older children is recommended within 5 years of initiation

of routine childhood vaccination programs. Although rates differ among areas, available data indicate that a reasonable cutoff age in many areas is 10-15 years of age because older persons have often already had hepatitis A. Vaccination of children before they enter school should receive highest priority, followed by vaccination of older children who have not been vaccinated.

*Men who have sex with men*

Sexually active men (both adolescents and adults) who have sex with men should be vaccinated.

Hepatitis A outbreaks among men who have sex with men have been reported frequently. Recent outbreaks have occurred in urban areas in the United States, Canada, and Australia.

*Illegal-drug users*

Vaccination is recommended for injecting and non-injecting illegal-drug users.

*Persons who have occupational risk for infection*

Persons who work with hepatitis A virus-infected primates or with hepatitis A virus in a research laboratory setting should be vaccinated. No other groups have been shown to be at increased risk for hepatitis A virus infection because of occupational exposure.

Outbreaks of hepatitis A have been reported among persons working with non-human primates that are susceptible to hepatitis A virus infection, including several Old World and New World species. Primates that were infected were those that had been born in the wild, not those that had been born and raised in captivity.

*Persons who have chronic liver disease*

Persons with chronic liver disease who have never had hepatitis A should be vaccinated, as there is a higher rate of fulminant (rapid onset of liver failure, often leading to death) hepatitis A among persons with chronic liver disease. Persons who are either awaiting or have received liver transplants also should be vaccinated.

*Persons who have clotting-factor disorders*

Persons who have never had hepatitis A and who are administered clotting-factor concentrates, especially solvent detergent-treated preparations, should be given hepatitis A vaccine.

All persons with hemophilia (Factor VIII, Factor IX) who receive replacement therapy should be vaccinated because there appears to be an increased risk of transmission from clotting-factor concentrates that are not heat inactivated.

## WHICH GROUPS *DO NOT* ROUTINELY NEED HEPATITIS A VACCINE?

### *Food service workers*

Food borne hepatitis A outbreaks are relatively uncommon in the United States; however, when they occur, intensive public health efforts are required for their control.

Although persons who work as food handlers have a critical role in common-source food borne outbreaks, they are not at increased risk for hepatitis A because of their occupation. Consideration may be given to vaccination of employees who work in areas where community-wide outbreaks are occurring and where state and local health authorities or private employers determine that such vaccination is cost-effective.

### *Sewerage workers*

In the United States, no work-related outbreaks of hepatitis A have been reported among workers exposed to sewage.

### *Health-care workers*

Health-care workers are not at increased risk for hepatitis A. If a patient with hepatitis A is admitted to the hospital, routine infection control precautions will prevent transmission to hospital staff.

### *Children under 2 years of age*

Because of the limited experience with hepatitis A vaccination among children under 2 years of age, the vaccine is not currently licensed for this age group.

### *Day-care attendees*

The frequency of outbreaks of hepatitis A is not high enough in this setting to warrant routine hepatitis A vaccination. In some communities, however, day-care centers play a role in sustaining community-wide outbreaks. In this situation, consideration should be given to adding hepatitis A vaccine to the prevention plan for children and staff in the involved center(s).

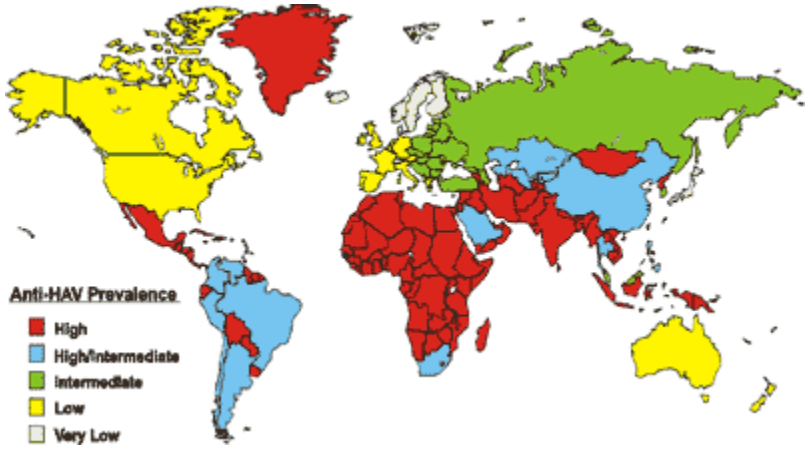
### *Residents of institutions for developmentally disabled persons*

Historically, hepatitis A virus infections were common among persons with developmental disabilities living in institutions. Currently, the occurrence of hepatitis A virus infections have diminished.

## INTERNATIONAL TRAVEL

***(The following map gives prevalence rates of hepatitis A)***

Anti-HAV Prevalence




*Who should receive protection against hepatitis A before travel?*

All susceptible persons traveling to or working in countries that have high or intermediate rates of hepatitis A should be vaccinated or receive immune globulin before traveling. Persons from developed countries who travel to developing countries are at high risk for hepatitis A. Such persons include tourists, military personnel, missionaries, and others who work or study abroad in countries that have high or intermediate levels of hepatitis A. The risk for hepatitis A exists even for travelers to urban areas, those who stay in luxury hotels, and those who report that they have good hygiene and that they are careful about what they drink and eat.

*How soon before travel should the first dose of hepatitis A vaccine be given?*

For optimal protection, the first dose of hepatitis A vaccine should be given at least 4 weeks prior to travel. Check with your doctor about when the next dose is due.

*What should be done if a person cannot receive hepatitis A vaccine*?

Travelers who are allergic to a vaccine component or who elect not to receive vaccine should receive a single dose of immune globulin (0.02 mL/kg), which provides effective protection against hepatitis A virus infection for up to 3 months. Travelers whose travel period exceeds 2 months should be administered immune globulin at 0.06 mL/kg; administration must be repeated if the travel period exceeds 5 months.

*If travel starts sooner than 4 weeks prior to the first vaccine dose, what should be done?*

Because protection might not be optimal until 4 weeks after vaccination, persons traveling to a high-risk area less than 4 weeks after the initial dose of hepatitis A vaccine should also be given immune globulin (0.02 mL/kg), but at a different injection site. Therefore, the first dose of hepatitis A vaccine should be administered as soon as travel to a high-risk area is planned.

*What should be done for travelers who are less than 2 years of age to protect them from hepatitis A virus infection?*

Immune globulin is recommended for travelers less than 2 years of age because the vaccine is currently not licensed for use in this age group.

# FREQUENTLY ASKED QUESTIONS

## Hepatitis B Virus

### *What is hepatitis B?*

Hepatitis B is caused by a virus that attacks the liver. The virus, which is called hepatitis B virus (HBV), can cause lifelong infection, cirrhosis (scarring) of the liver, liver cancer, liver failure, and death.

### *How do you know if you have hepatitis B?*

Only a blood test can tell for sure.

### *How is HBV spread?*

HBV is spread when blood or body fluids from an infected person enters the body of a person who is not infected. For example, HBV is spread through having sex with an infected person without using a condom (the efficacy of latex condoms in preventing infection with HBV is unknown, but their proper use might reduce transmission), by sharing drugs, needles, or "works" when "shooting" drugs, through needlesticks or sharps exposures on the job, or from an infected mother to her baby during birth.

Hepatitis B is not spread through food or water, sharing eating utensils, breastfeeding, hugging, kissing, coughing, sneezing or by casual contact.

### *What are the symptoms of hepatitis B?*

Sometimes a person with HBV infection has no symptoms at all. The older you are, the more apt you are to have symptoms. You might be infected with HBV (and be spreading the virus) and not know it.

If you have symptoms, they might include:

- Yellow skin or yellowing of the whites of your eyes (jaundice)
- Tiredness
- Loss of appetite
- Nausea
- Abdominal discomfort
- Dark urine
- Clay-colored bowel movements
- Joint pain

### *What are the risk factors for hepatitis B?*

You are at increased risk of HBV infection if you:

- Have sex with someone infected with HBV
- Have sex with more than one partner
- Shoot drugs
- Are a man and have sex with a man
- Live in the same house with someone who has chronic (long-term) HBV infection
- Have a job that involves contact with human blood
- Are a client in a home for the developmentally disabled

- Have hemophilia
- Travel to areas where hepatitis B is common (view map)

One out of 20 people in the United States will get infected with HBV some time during their lives.
Your risk is higher if your parents were born in Southeast Asia, Africa, and the Amazon Basin in South America, the Pacific Islands, or the Middle East.

*Is there a cure for hepatitis B?*
There are no medications available for recently acquired (acute) HBV infection. Hepatitis B vaccine is available for the prevention of HBV infection. There are antiviral drugs available for the treatment of chronic HBV infection.

*How common is HBV infection in the U.S.?*
In 2003, an estimated 73,000 people were infected with HBV. People of all ages get hepatitis B and about 5,000 die per year of sickness caused by HBV.

*If you are pregnant, should you worry about hepatitis B?*
Yes, you should get a blood test to check for HBV infection early in your pregnancy. This test is called hepatitis B surface antigen (HBsAg). If you test HBsAg-negative early in pregnancy, but continue behaviors that put you at risk for HBV infection (e.g., multiple sex partners, injection drug use), you should be retested for HBsAg close to delivery. If your HBsAg test is positive, this means you are infected with HBV and can give the virus to your baby. Babies who get HBV at birth might develop chronic HBV infection that can lead to cirrhosis of the liver or liver cancer.
If your blood test is positive, your baby should receive the first dose of hepatitis B vaccine, along with another shot, hepatitis B immune globulin (called HBIG), at birth. The second dose of vaccine should be given at aged 1-2 months and the third dose at aged 6 months (but not before aged 24 weeks).

*Can I donate blood if I have had any type of viral hepatitis?*
If you had any type of viral hepatitis since aged 11 years, you are not eligible to donate blood. In addition, if you ever tested positive for hepatitis B or hepatitis C, at any age, you are not eligible to donate, even if you were never sick or jaundiced from the infection.

*How long can HBV survive outside the body?*
HBV can survive outside the body at least 7 days and still be capable of causing infection.

## Hepatitis B Vaccine Information

*Who should get vaccinated?*

- All babies, at birth
- All children 0-18 years of age who have not been vaccinated
- People of any age whose behavior or job puts them at high risk for HBV infection (see risk factors under general information)

*What are the dosages and schedules for hepatitis B vaccines?*
The vaccination schedule most often used for adults and children has been three intramuscular injections, the second and third administered 1 and 6 months after the first. Recombivax HB® has been approved as a two dose schedule for aged 11-15 years. Engerix-B® has also been approved as a four dose accelerated schedule.

*Can you receive one dose of hepatitis B vaccine from one manufacturer and the other doses from another manufacturer?*
Yes. The immune response when one or two doses of a vaccine produced by one manufacturer are followed by subsequent doses from a different manufacturer has

been shown to be comparable with that resulting from a full course of vaccination from one manufacturer.

*What should be done if there is an interruption between doses of hepatitis B vaccine?*

If the vaccination series is interrupted after the first dose, the second dose should be administered as soon as possible. The second and third doses should be separated by an interval of at least 2 months. If only the third dose is delayed, it should be administered when convenient.

*Can other vaccines be given at the same time that hepatitis B vaccine is given?*

Yes. When hepatitis B vaccine has been administered at the same time as other vaccines, no interference with the antibody response of the other vaccines has been demonstrated.

*Are hepatitis B vaccines safe?*

Yes. Hepatitis B vaccines have been shown to be safe when administered to both adults and children. Over 4 million adults have been vaccinated in the U.S., and at least that many children have received hepatitis B vaccine worldwide.

*How long does hepatitis B vaccine protect you?*

Long-term studies of healthy adults and children, who have developed adequate antibody to hepatitis B surface antigen (anti-HBs), indicate that immunologic memory remains intact for at least 15 years and confers protection against clinical illness and chronic HBV infection, even though anti-HBs levels might become low or decline below detectable levels.

*Can hepatitis B vaccine be given after exposure to HBV?*

Yes. After a person has been exposed to HBV, appropriate treatment, given in an appropriate time frame, can effectively prevent infection. The mainstay of post exposure immunoprophylaxis is hepatitis B vaccine, but in some settings the addition of HBIG will provide some increase in protection.

*Should pre-vaccination testing be done?*

Pre-vaccination testing is not routinely recommended. The decision to do pre-vaccination testing is usually based on cost. To avoid vaccinating persons who have already had or have HBV infection, testing for prior infection should be considered for adults in risk groups with high rates of HBV infection (e.g., injecting drug users, men who have sex with men and household contacts of persons with chronic HBV infection).

Pre-vaccination testing is not indicated for immunization programs for children or adolescents because of the low rate of HBV infection and the relatively low cost of vaccine.

*Who should get post-vaccination testing?*

Testing for immunity is advised only for persons whose subsequent clinical management depends on knowledge of their immune status (e.g., infants born to HBsAg-positive mothers, immune compromised persons, healthcare workers, and sex partners of persons with chronic HBV infection).

*When should post-vaccination testing be done?*

When necessary, post-vaccination testing, using the anti-HBs test, should be performed 1 to 2 months after completion of the vaccine series – EXCEPT for post-vaccination testing of infants born to HBsAg-positive mothers. Testing of these infants should be performed 3 to 9 months after the completion of the vaccination series

*For how long is hepatitis B vaccine effective?*

Long-term studies of healthy adults and children indicate that hepatitis B vaccine protects against chronic HBV infection for at least 15 years, even though antibody levels might decline below detectable levels.

*Are booster doses of hepatitis B vaccine needed routinely?*

No, booster doses of hepatitis B vaccine are not recommended routinely for persons who are not immune compromised. Data show that vaccine-induced anti-HBs levels might decline over time; however, immune memory remains intact indefinitely following immunization. Immune competent people with declining antibody levels are still protected against clinical illness and chronic disease.

*Can hepatitis B vaccine be given during pregnancy or when breastfeeding?*

Yes, neither pregnancy nor breastfeeding should be considered a contraindication to vaccination of women. On the basis of limited experience, there is no apparent risk of adverse effects to developing fetuses when hepatitis B vaccine is administered to pregnant women. The vaccine contains noninfectious HBsAg particles and should cause no risk to the fetus. HBV infection affecting a pregnant woman might result in severe disease for the mother and chronic HBV infection for the newborn.

*Can hepatitis B vaccine be given to immune compromised people? (e.g., people on hemodialysis or people with HIV/AIDS)*

Yes, however larger vaccine doses or an increased number of doses are required to induce protective antibody in a high proportion of hemodialysis patients and might also be necessary for other immune compromised people (e.g., those who take immunosuppressive drugs or who have AIDS). For immune compromised people, it is important that post vaccination testing, using the anti-HBs test, be done 1-2 months after the last dose of vaccine to check that the vaccine worked. In addition, immune compromised people need periodic testing and possibly booster doses of hepatitis B vaccine to assure that anti-HBs is still adequate.

*What is the rationale for recommending the hepatitis B vaccination of children and other groups mentioned above?*

- In the United States, hepatitis B virus (HBV) transmission occurs in all age groups and a comprehensive strategy is needed to provide widespread immunity and to effectively prevent HBV-related chronic liver disease. Beginning in the late 1980s, the Advisory Committee on Immunization Practices to the U.S. Public Health Service developed a comprehensive strategy to eliminate HBV transmission in the United States. This strategy includes 1) screening of all pregnant woman for hepatitis B surface antigen (HbsAg) and providing postexposure immunoprophylaxis beginning at birth to infants of HbsAg-positive mothers; 2) routine infant vaccination; 3) catch-up vaccination of previously unvaccinated children and adolescents; and 4) vaccination of adults in high risk groups.

## If You Are Living With Chronic Hepatitis B

*What does the term "chronic hepatitis B" mean?*

Chronic infection with HBV means that you have a long-term HBV infection; your body did not get rid of the virus when you were first infected with HBV. Two percent to 6% of people over aged 5 years; 30% of children aged 1-5 years; and up to 90% of infants develop chronic infection. People with chronic infection can infect others and are at increased risk of serious liver disease including cirrhosis and liver cancer. In the United States, an estimated 1.25 million people are chronically infected with HBV.

*What is the treatment for chronic hepatitis B?*

There are three drugs licensed for the treatment of people with chronic hepatitis B: Adefovir dipivoxil, alpha interferon, and lamivudine. These drugs work in up to 40% of people.

## Traveler's Health Information

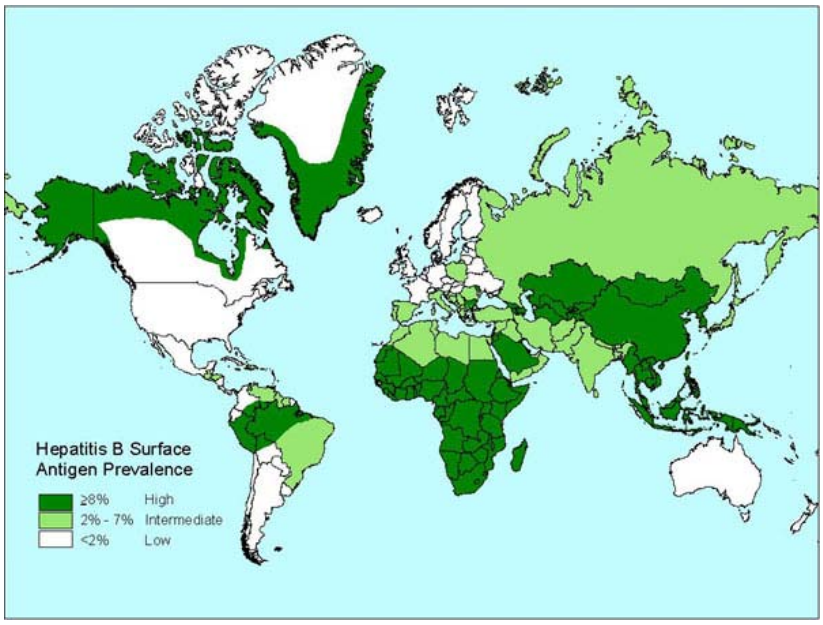
*What is the risk of getting HBV infection while traveling in other countries?*

The risk of HBV infection for international travelers is generally low, except for certain travelers in countries where the prevalence of chronic HBV infection is high or intermediate (see map).

Factors to consider in assessing risk include 1) the prevalence of chronic HBV infection in the local population, 2) the extent of direct contact with blood or other body fluids or of sex contact with potentially infected people, and 3) the duration of travel.

Modes of HBV transmission in areas with high or intermediate prevalence of chronic HBV infection that are important for travelers to consider are contaminated injection and other equipment used for health care-related procedures and blood transfusions from unscreened donors. However, unprotected sex and sharing illegal drug injection equipment are also risks for HBV infection in these areas.

**World Map of Hepatitis B surface antigen (HBsAg) Prevalence, 2002**




1. **High (8% or more) in**
   - Alaska and extreme northern Canada and southern Greenland;
   - A band crossing South America, including northern Chile, southern Colombia, extreme southern Venezuela, northwestern Brazil and northern Bolivia;
   - Parts of Eastern Europe, including Moldova, Bulgaria, Georgia, Armenia, and Azerbaijan
   - All of Africa except northern Morocco, Algeria, Tunisia, Libya, and Egypt;
   - Saudi Arabia, Lebanon, Israel, and Jordan;
   - Turkmenistan, Uzbekistan, Kazakhstan, Kyrgyzstan, Tajikistan, Mongolia;

- South Asia and Southeast Asia.

2. **Intermediate (2% to 7%) in**
   - Parts of Central America, including Guatemala, El Salvador, Honduras, Haiti and the Dominican Republic;
   - Parts of South America, including northern Venezuela, Guyana and Suriname, and central and southern Brazil;
   - Northern Africa, including northern Morocco, Algeria, Tunisia, Libya, and Egypt;
   - The Middle East except Saudi Arabia, Lebanon, Israel, and Jordan;
   - Southern sections of Eastern Europe except Moldova, Bulgaria, Georgia, Armenia, and Azerbaijan; and Poland;
   - Portions of Western Europe including Italy, Sardinia, Spain, Portugal;
   - Russia;
   - Japan.
3. **Low (under 2%) in all areas not already listed**

## Serology

*How do I interpret serological lab results?*

| Interpretation of the Hepatitis B Panel | | |
|---|---|---|
| **Tests** | **Results** | **Interpretation** |
| HBsAg<br>anti-HBc<br>anti-HBs | negative<br>negative<br>negative | Susceptible |
| HBsAg<br>anti-HBc<br>anti-HBs | negative<br>positive<br>positive | Immune due to natural infection |
| HBsAg<br>anti-HBc<br>anti-HBs | negative<br>negative<br>positive | Immune due to hepatitis B vaccination |
| HBsAg<br>anti-HBc<br>IgM anti-HBc<br>anti-HBs | positive<br>positive<br>positive<br>negative | Acutely infected |
| HBsAg<br>anti-HBc<br>IgM anti-HBc<br>anti-HBs | positive<br>positive<br>negative<br>negative | Chronically infected |
| HBsAg<br>anti-HBc<br>anti-HBs | negative<br>positive<br>negative | Four interpretations possible * |

* Four Interpretations:

1. Might be recovering from acute HBV infection.
2. Might be distantly immune and test not sensitive enough to detect very low level of anti-HBs in serum.
3. Might be susceptible with a false positive anti-HBc.
4. Might be undetectable level of HBsAg present in the serum and the person is actually chronically infected.

*What do the different abbreviations on the lab results mean?*

- **Hepatitis B Surface Antigen (HBsAg):** A serologic marker on the surface of HBV. It can be detected in high levels in serum during acute or chronic hepatitis. The presence of HBsAg indicates that the person is infectious. The body normally produces antibodies to HBsAg as part of the normal immune response to infection.
- **Hepatitis B Surface Antibody (anti-HBs):** The presence of anti-HBs is generally interpreted as indicating recovery and immunity from HBV infection. Anti-HBs also develops in a person who has been successfully vaccinated against hepatitis B.
- **Hepatitis B Core Antibody (anti-HBc):** Appears at the onset of symptoms in acute hepatitis B and persists for life. The presence of anti-HBc indicates previous or ongoing infection with hepatitis B virus (HBV) in an undefined time frame.
- **Hepatitis B e Antigen (HBeAg):** A secreted product of the nucleocapsid gene of HBV and is found in serum during acute and chronic hepatitis B. Its presence indicates that the virus is replicating and the infected individual has high levels of HBV.
- **Hepatitis B e Antibody (HBeAb or anti-HBe):** produced by the immune system temporarily during acute HBV infection or consistently during or after a burst in viral replication. Spontaneous conversion from e antigen to e antibody (a change known as seroconversion) is a predictor of long-term clearance of HBV in patients undergoing antiviral therapy and indicates lower levels of HBV.
- **Hepatitis B Immune Globulin (HBIG):** A product available for prophylaxis against HBV infection. HBIG is prepared from plasma containing high titers of anti-HBs and provides short-term protection (3 - 6 months).

# FREQUENTLY ASKED QUESTIONS

## Hepatitis C Virus

*What is hepatitis C?*

Hepatitis C is a liver disease caused by the hepatitis C virus (HCV), which is found in the blood of persons who have this disease. HCV is spread by contact with the blood of an infected person.

*Is there a vaccine for the prevention of HCV infection?*
No.

*What blood tests are available to check for hepatitis C?*
There are several blood tests that can be done to determine if you have been infected with HCV. Your doctor may order just one or a combination of these tests. The following are the types of tests your doctor may order and the purpose for each:

**a) Anti-HCV (antibody to HCV)**

- EIA (enzyme immunoassay) or CIA (enhanced chemiluminescence immunoassay)
  Test is usually done first. If positive, it should be confirmed

- RIBA (recombinant immunoblot assay)
  A supplemental test used to confirm a positive EIA test

Anti-HCV does not tell whether the infection is new (acute), chronic (long-term) or is no longer present.

**b) Qualitative tests to detect presence or absence of virus (HCV RNA)**

**c) Quantitative tests to detect amount (titer) of virus (HCV RNA)**

A single positive PCR test indicates infection with HCV. A single negative test does not prove that a person is not infected. Virus may be present in the blood and just not found by PCR. Also, a person infected in the past who has recovered may have a negative test. When hepatitis C is suspected and PCR is negative, PCR should be repeated.

*Can you have a "false positive" anti-HCV test result?*
Yes. A false positive test means the test looks as if it is positive, but it is really negative. This happens more often in persons who have a low risk for the disease for which they are being tested. For example, false positive anti-HCV tests happen more often in persons such as blood donors who are at low risk for hepatitis C. Therefore, it is important to confirm a positive anti-HCV test with a supplemental test as most false positive anti-HCV tests are reported as negative on supplemental testing. Click here for more information on Guidelines for Laboratory Testing and Result Reporting of Antibody to Hepatitis C Virus.

*Can you have a "false negative" anti-HCV test result?*
Yes. Persons with early infection may not as yet have developed antibody levels high enough that the test can measure. In addition, some persons may lack the (immune) response necessary for the test to work well. In these persons, research-based tests such as PCR may be considered.

*How long after exposure to HCV does it take to test positive for anti-HCV?*

Anti-HCV can be found in 7 out of 10 persons when symptoms begin and in about 9 out of 10 persons within 3 months after symptoms begin. However, it is important to note that many persons who have hepatitis C have no symptoms.

*How long after exposure to HCV does it take to test positive with PCR?*

It is possible to find HCV within 1 to 2 weeks after being infected with the virus.

*Who should get tested for hepatitis C?*

- persons who ever injected illegal drugs, including those who injected once or a few times many years ago
- persons who were treated for clotting problems with a blood product made before 1987 when more advanced methods for manufacturing the products were developed
- persons who were notified that they received blood from a donor who later tested positive for hepatitis C
- persons who received a blood transfusion or solid organ transplant before July 1992 when better testing of blood donors became available
- long-term hemodialysis patients
- persons who have signs or symptoms of liver disease (e.g., abnormal liver enzyme tests)
- healthcare workers after exposures (e.g., needle sticks or splashes to the eye ) to HCV-positive blood on the job
- children born to HCV-positive women

*What is the next step if you have a confirmed positive anti-HCV test?*

Measure the level of ALT ( alanine aminotransferase, a liver enzyme) in the blood. An elevated ALT indicates inflammation of the liver and you should be checked further for chronic (long-term) liver disease and possible treatment. The evaluation should be done by a healthcare professional familiar with chronic hepatitis C.

*Can you have a normal liver enzyme (e.g., ALT) level and still have chronic hepatitis C?*

Yes. It is common for persons with chronic hepatitis C to have a liver enzyme level that goes up and down, with periodic returns to normal or near normal. Some persons have a liver enzyme level that is normal for over a year but they still have chronic liver disease. If the liver enzyme level is normal, persons should have their enzyme level re-checked several times over a 6 to 12 month period. If the liver enzyme level remains normal, your doctor may check it less frequently, such as once a year.

## How is HCV spread from one person to another?

*How could a person have gotten hepatitis C?*
HCV is spread primarily by direct contact with human blood. For example, you may have gotten infected with HCV if:

- you ever injected or snorted street drugs, as the needles and/or other drug "works" used to prepare or inject the drug(s) may have had someone else's blood that contained HCV on them.
- you received blood, blood products, or solid organs from a donor whose blood contained HCV.
- you were ever on long-term kidney dialysis as you may have unknowingly shared supplies/equipment that had someone else's blood on them.
- you were ever a healthcare worker and had frequent contact with blood on the job, especially accidental needlesticks.
- your mother had hepatitis C at the time she gave birth to you. During the birth her blood may have gotten into your body.
- you ever had sex with a person infected with HCV.
- you lived with someone who was infected with HCV and shared items such as razors or toothbrushes that might have had his/her blood on them.

*How long can HCV live outside the body and transmit infection?*
Recent studies suggest that HCV may survive on environmental surfaces at room temperature at least 16 hours, but no longer than 4 days.

*Is there any evidence that HCV has been spread during medical or dental procedures done in the United States?* Medical and dental procedures done in the United States generally do not pose a risk for the spread of HCV. However, there have been a few situations in which HCV has been spread between patients when supplies or equipment were shared between them.

*Can HCV be spread by sexual activity?*
Yes, but this does not occur very often. See section below on counseling for more information on hepatitis C and sexual activity.

*Can HCV be spread by oral sex?*
There is no evidence that HCV has been spread by oral sex. See section on counseling for more information on hepatitis C and sexual activity.

*Can HCV be spread within a household?*
Yes, but this does not occur very often. If HCV is spread within a household, it is most likely due to direct exposure to the blood of an infected household member.

*Since more advanced tests have been developed for use in blood banks, what is the chance now that a person can get HCV infection from transfused blood or blood products?*
Less than 1 chance per million units transfused.

## Pregnancy and Breast feeding

*Should pregnant women be routinely tested for anti-HCV?* No. Pregnant women have no greater risk of being infected with HCV then non-pregnant women. If pregnant women have risk factors for hepatitis C, they should be tested for anti-HCV.

*What is the risk that HCV infected women will spread HCV to their newborn infants?*
About 5 out of every 100 infants born to HCV infected women become infected. This occurs at the time of birth, and there is no treatment that can prevent this from happening. Most infants infected with HCV at the time of birth have no symptoms and do well during childhood. More studies are needed to find out if these children will have problems from the infection as they grow older. There are no licensed treatments or guidelines for the treatment of infants or children infected with HCV. Children with elevated ALT (liver enzyme) levels should be referred for evaluation to a specialist familiar with the management of children with HCV-related disease.

*Should a woman with hepatitis C be advised against breast-feeding?*
No. There is no evidence that breast-feeding spreads HCV. HCV-positive mothers should consider abstaining from breast-feeding if their nipples are cracked or bleeding.

*When should babies born to mothers with hepatitis C be tested to see if they were infected at birth?*
Children should not be tested for anti-HCV before 18 months of age as anti-HCV from the mother might last until this age. If diagnosis is desired prior to 18 months of age, testing for HCV RNA could be performed at or after an infant's first well-child visit at age 1-2 months. HCV RNA testing should then be repeated at a subsequent visit independent of the initial HCV RNA test result.

## Counseling

*How can persons infected with HCV prevent spreading HCV to others?*

- Do not donate blood, body organs, other tissue, or semen.
- Do not share personal items that might have your blood on them, such as toothbrushes, dental appliances, nail-grooming equipment or razors.
- Cover your cuts and skin sores to keep from spreading HCV.

*How can a person protect themselves from getting hepatitis C and other diseases spread by contact with human blood?*

- Don't ever shoot or snort drugs. If you shoot drugs, stop and get into a treatment program. If you can't stop, never reuse or share syringes, water, or drug works, and get vaccinated against hepatitis A and hepatitis B.

- Do not share toothbrushes, razors, or other personal care articles. They might have blood on them.
- If you are a healthcare worker, always follow routine barrier precautions and safely handle needles and other sharps. Get vaccinated against hepatitis B
- Consider the health risks if you are thinking about getting a tattoo or body piercing: You can get infected if:
    - the tools that are used have someone else's blood on them.
    - the artist or piercer doesn't follow good health practices, such as washing hands and using disposable gloves.

HCV can be spread by sex, but this does not occur very often. If you are having sex, but not with one steady partner:

- You and your partners can get other diseases spread by having sex (e.g., AIDS, hepatitis B, gonorrhea or chlamydia).
- You should use latex condoms correctly and every time. The efficacy of latex condoms in preventing infection with HCV is unknown, but their proper use may reduce transmission.
- You should get vaccinated against hepatitis B.

 *Should patients with hepatitis C change their sexual practices if they have only one long-term steady sex partner?* No. There is a very low chance of spreading HCV to that partner through sexual activity. If you want to lower the small chance of spreading HCV to your sex partner, you may decide to use barrier precautions such as latex condoms. The efficacy of latex condoms in preventing infection with HCV is unknown, but their proper use may reduce transmission. Ask your doctor about having your sex partner tested.

 *What can persons with HCV infection do to protect their liver?*

- Stop using alcohol.
- See your doctor regularly.
- Don't start any new medicines or use over-the-counter, herbal, and other medicines without a physician's knowledge.
- Get vaccinated against hepatitis A if liver damage is present.

 *What other information should patients with hepatitis C be aware of?*

- HCV is not spread by sneezing, hugging, coughing, food or water, sharing eating utensils or drinking glasses, or casual contact.
- Persons should not be excluded from work, school, play, child-care or other settings on the basis of their HCV infection status.
- Involvement with a support group may help patients cope with hepatitis C.

 *Should persons with chronic hepatitis C be vaccinated against hepatitis B?*

If persons are in risk groups for whom hepatitis B vaccine is recommended, they should be vaccinated.

## Long-term Consequences of HCV Infection

*What are the chances of persons with HCV infection developing long term infection, chronic liver disease, cirrhosis, liver cancer, or dying as a result of hepatitis C?*

Of every 100 persons infected with HCV about:

- 55-85 of persons might develop long-term infection
- 70 persons might develop chronic liver disease
- 5-20 persons might develop cirrhosis over a period of 20 to 30 years
- 1-5 of persons might die from the consequences of long term infection (liver cancer or cirrhosis)

Hepatitis C is a leading indication for liver transplants.

*Do medical conditions outside the liver occur in persons with chronic hepatitis C?*

A small percentage of persons with chronic hepatitis C develop medical conditions outside the liver (this is called extrahepatic). These conditions are thought to occur due to the body's natural immune system fighting against itself. Such conditions include: glomerulonephritis, essential mixed cryoglobulinemia, and porphyria cutanea tarda.

## Management and Treatment of Chronic Hepatitis C

*When might a specialist (gastroenterologist, infectious disease physician, or hepatologist) be consulted in the management of HCV-infected persons?*

A referral to or consultation with a specialist for further evaluation and possible treatment may be considered if a person is anti-HCV positive and has elevated liver enzyme levels. Any physician who manages a person with hepatitis C should be knowledgeable and current on all aspects of the care of a person with hepatitis C.

*What is the treatment for chronic hepatitis C?*

Combination therapy with pegylated interferon and ribavirin is the treatment of choice resulting in sustained response rates of 40%-80%. (up to 50% for patients infected with the most common genotype found in the U.S. [genotype 1] and up to 80% for patients infected with genotypes 2 or 3). Interferon monotherapy is generally reserved for patients in whom ribavirin is contraindicated. Ribavirin, when used alone, does not work. Combination therapy using interferon and ribavirin is now FDA approved for the use in children aged 3-17 years.

### *What are the side effects of interferon therapy?*

Most persons have flu-like symptoms (fever, chills, headache, muscle and joint aches, fast heart rate) early in treatment, but these lessen with continued treatment. Later side effects may include tiredness, hair loss, low blood count, trouble with thinking, moodiness, and depression. Severe side effects are rare (seen in less than 2 out of 100 persons). These include thyroid disease, depression with suicidal thoughts, seizures, acute heart or kidney failure, eye and lung problems, hearing loss, and blood infection. Although rare, deaths have occurred due to liver failure or blood infection, mostly in persons with cirrhosis. An important side effect of interferon is worsening of liver disease with treatment, which can be severe and even fatal. Interferon dosage must be reduced in up to 40 out of 100 persons because of severity of side effects, and treatment must be stopped in up to 15 out of 100 persons. Pregnant women should not be treated with interferon.

### *What are the side effects of combination (ribavirin + interferon) treatment?*

In addition to the side effects due to interferon described above, ribavirin can cause serious anemia (low red blood cell count) and can be a serious problem for persons with conditions that cause anemia, such as kidney failure. In these persons, combination therapy should be avoided or attempts should be made to correct the anemia. Anemia caused by ribavirin can be life-threatening for persons with certain types of heart or blood vessel disease. Ribavirin causes birth defects and pregnancy should be avoided during treatment. Patients and their healthcare providers should carefully review the product manufacturer information prior to treatment.

### *Can anything be done to reduce symptoms or side effects due to antiviral treatment?*

You should report what you are feeling to your doctor. Some side effects may be reduced by giving interferon at night or lowering the dosage of the drug. In addition, flu-like symptoms can be reduced by taking acetaminophen before treatment.

### *Can children receive interferon therapy for chronic hepatitis C?*

The Food and Drug Administration has approved the use of the combination anti-viral therapy for the treatment of hepatitis C in children 3 to 17 years old. For details please refer to page 11 of AASLD Practice Guideline: Diagnosis, Treatment, and Management of Hepatitis C.

## Genotype

### *What does the term genotype mean?*

Genotype refers to the genetic make-up of an organism or a virus. There are at least 6 distinct HCV genotypes identified. Genotype 1 is the most common genotype seen in the United States.

*Is it necessary to do genotyping when managing a person with chronic hepatitis C?*

Yes, as there are 6 known genotypes and more than 50 subtypes of HCV, and genotype information is helpful in defining the epidemiology of hepatitis C. Knowing the genotype or serotype (genotype-specific antibodies) of HCV is helpful in making recommendations and counseling regarding therapy. Patients with genotypes 2 and 3 are almost three times more likely than patients with genotype 1 to respond to therapy with alpha interferon or the combination of alpha interferon and ribavirin. Furthermore, when using combination therapy, the recommended duration of treatment depends on the genotype. For patients with genotypes 2 and 3, a 24-week course of combination treatment is adequate, whereas for patients with genotype 1, a 48-week course is recommended. For these reasons, testing for HCV genotype is often clinically helpful. Once the genotype is identified, it need not be tested again; genotypes do not change during the course of infection.

*Why do most persons remain infected?*

Persons infected with HCV mount an antibody response to parts of the virus, but changes in the virus during infection result in changes that are not recognized by preexisting antibodies. This appears to be how the virus establishes and maintains long-lasting infection.

*Can persons become infected with different genotypes?*

Yes. Because of the ineffective immune response described above, prior infection does not protect against reinfection with the same or different genotypes of the virus. For the same reason, there is no effective pre- or postexposure prophylaxis (i.e, immune globulin) available.

## Hepatitis C and Healthcare Workers

*What is the risk for HCV infection from a needle-stick exposure to HCV contaminated blood?*

After needle stick or sharps exposure to HCV positive blood, about 2 (1.8%) healthcare workers out of 100 will get infected with HCV (range 0%-10%).

*What are the recommendations for follow-up of healthcare workers after exposure to HCV positive blood?*

Anti-viral agents (e.g., interferon) or immune globulin should not be used for postexposure prophylaxis.

1. For the source, baseline testing for anti-HCV.
2. For the person exposed to an HCV-positive source, baseline and follow-up testing including
   baseline testing for anti-HCV and ALT activity; and
   follow-up testing for anti-HCV (e.g., at 4-6 months) and ALT activity. (If earlier diagnosis of HCV infection is desired, testing for HCV RNA may be performed at 4-6 weeks.)
3. Confirmation by supplemental anti-HCV testing of all anti-HCV results reported as positive by enzyme immunoassay.

*Should HCV-infected healthcare workers be restricted in their work?*

No, there are no recommendations to restrict a healthcare worker who is infected with HCV. The risk of transmission from an infected healthcare worker to a patient appears to be very low. As recommended for all healthcare workers, those who are HCV positive should follow strict aseptic technique and standard precautions, including appropriate use of hand washing, protective barriers, and care in the use and disposal of needles and other sharp instruments.

# FREQUENTLY ASKED QUESTIONS

# HIV and Hepatitis C Virus Co-infection

***Why should HIV-infected persons be concerned about co-infection with HCV?***

About one quarter of HIV-infected persons in the United States are also infected with hepatitis C virus (HCV). HCV is one of the most important causes of chronic liver disease in the United States and HCV infection progresses more rapidly to liver damage in HIV-infected persons. HCV infection may also impact the course and management of HIV infection.

The latest U.S. Public Health Service/Infectious Diseases Society of America (USPHS/IDSA) guidelines recommend that all HIV-infected persons should be screened for HCV infection. Prevention of HCV infection for those not already infected and reducing chronic liver disease in those who are infected are important concerns for HIV-infected individuals and their health care providers.

***Who is likely to have HIV-HCV co-infection?***

The hepatitis C virus (HCV) is transmitted primarily by large or repeated direct percutaneous (i.e., passage through the skin by puncture) exposures to contaminated blood. Therefore, co-infection with HIV and HCV is common (50%-90%) among HIV-infected injection drug users (IDUs). Co-infection is also common among persons with hemophilia who received clotting factor concentrates before concentrates were effectively treated to inactivate both viruses (i.e., products made before 1987). The risk for acquiring infection through perinatal or sexual exposures is much lower for HCV than for HIV. For persons infected with HIV through sexual exposure (e.g., male-to-male sexual activity), co-infection with HCV is no more common than among similarly aged adults in the general population (3%-5%).

***What are the effects of co-infection on disease progression of HCV and HIV?***

Chronic HCV infection develops in 75%-85% of infected persons and leads to chronic liver disease in 70% of these chronically infected persons. HIV-HCV co-infection has been associated with higher titers of HCV, more rapid progression to HCV-related liver disease, and an increased risk for HCV-related cirrhosis (scarring) of the liver. Because of this, HCV infection has been viewed as an opportunistic infection in HIV-infected persons and was included in the 1999 USPHS/IDSA Guidelines for the Prevention of Opportunistic Infections in Persons Infected with Human Immunodeficiency Virus. It is not, however, considered an AIDS-defining illness. As highly active antiretroviral therapy (HAART) and prophylaxis of opportunistic infections increase the life span of persons living with HIV, HCV-related liver disease has become a major cause of hospital admissions and deaths among HIV-infected persons.

The effects of HCV co-infection on HIV disease progression are less certain. Some studies have suggested that infection with certain HCV genotypes is associated with more rapid progression to AIDS or death. However, the subject remains controversial. Since co-infected patients are living longer on HAART, more data are needed to determine if HCV infection influences the long-term natural history of HIV infection.

***How can co-infection with HCV be prevented?***

Persons living with HIV who are not already co-infected with HCV can adopt measures to prevent acquiring HCV. Such measures will also reduce the chance of transmitting their HIV infection to others.

Not injecting or stopping injection drug use would eliminate the chief route of HCV transmission; substance-abuse treatment and relapse-prevention programs should be recommended. If patients continue to inject, they should be counseled about safer injection practices; that is, to use new, sterile syringes every time they inject drugs and never reuse or share syringes, needles, water, or drug preparation equipment.

Toothbrushes, razors, and other personal care items that might be contaminated with blood should not be shared. Although there are no data from the United States indicating that tattooing and body piercing place persons at increased risk for HCV infection, these procedures may be a source for infection with any bloodborne pathogen if proper infection control practices are not followed.

Although consistent data are lacking regarding the extent to which sexual activity contributes to HCV transmission, persons having multiple sex partners are at risk for other sexually transmitted diseases (STDs) as well as for transmitting HIV to others. They should be counseled accordingly.

***How should patients co-infected with HIV and HCV be managed?***

***General guidelines***

Patients co-infected with HIV and HCV should be encouraged to adopt safe behaviors (as described in the previous section) to prevent transmission of HIV and HCV to others.

Individuals with evidence of HCV infection should be given information about prevention of liver damage, undergo evaluation for chronic liver disease and, if indicated, be considered for treatment. Persons co-infected with HIV and HCV should be advised not to drink excessive amounts of alcohol. Avoiding alcohol altogether might be wise because the effects of even moderate or low amounts of alcohol (e.g., 12 oz. of beer, 5 oz. of wine or 1.5 oz. hard liquor per day) on disease progression are unknown. When appropriate, referral should be made to alcohol treatment and relapse-prevention programs. Because of possible effects on the liver, HCV- infected patients should consult with their health care professional before taking any new medicines, including over-the-counter, alternative or herbal medicines.

Susceptible co-infected patients should receive hepatitis A vaccine because the risk for fulminant hepatitis associated with hepatitis A is increased in persons with chronic liver disease. Susceptible patients should receive hepatitis B vaccine because most HIV-infected persons are at risk for HBV infection. The vaccines appear safe for these patients and more than two-thirds of those vaccinated develop antibody responses. Pre-vaccination screening for antibodies against hepatitis A and hepatitis B in this high-prevalence population is generally cost-effective. Post-vaccination testing for hepatitis A is not recommended, but testing for antibody to hepatitis B surface antigen (anti-HBs) should be performed 1-2 months after completion of the primary series of hepatitis B vaccine. Persons who fail to respond should be revaccinated with up to three additional doses.

HAART has no significant effect on HCV. However, co-infected persons may be at increased risk for HAART-associated liver toxicity and should be closely monitored during antiretroviral therapy. Data suggest that the majority of these persons do not appear to develop significant and/or symptomatic hepatitis after initiation of antiretroviral therapy.

### *Treatment for HCV Infection*

A Consensus Development Conference Panel convened by The National Institutes of Health in 1997 recommended antiviral therapy for patients with chronic hepatitis C who are at the greatest risk for progression to cirrhosis. These persons include anti-HCV positive patients with persistently elevated liver enzymes, detectable HCV RNA, and a liver biopsy that indicates either portal or bridging fibrosis or at least moderate degrees of inflammation and necrosis. Patients with less severe histological disease should be managed on an individual basis.

In the United States, three different regimens have been approved as therapy for chronic hepatitis C in mono-infected patients: monotherapy with alpha interferon and combination therapy with alpha interferon and ribavirin. Among HIV-negative persons with chronic hepatitis C, combination therapy consistently yields higher rates of sustained virologic response than monotherapy. Viral genotypes 2 and 3 require a shorter course of treatment. However, viral genotype 1 is the most common among U.S. patients. Combination therapy is associated with more side effects than monotherapy, but, in most situations, it is preferable. At present, interferon monotherapy is reserved for patients who have contraindications to the use of ribavirin.

Studies thus far, although not extensive, have indicated that response rates in HIV-infected patients to alpha interferon monotherapy for HCV were lower than in non-HIV-infected patients. On February 25, 2005 one regimen became FDA approved for treatment of HCV in HIV co-infected patients, pegylated interferon alpha 2-a and ribavirin tablets. A 40% sustained viral rate was demonstrated in this population; 29% sustained viral rate in genotype 1 and 62% sustained viral rate in genotypes 2 and 3.

The decision to treat people co-infected with HIV and HCV must also take into consideration their concurrent medications and medical conditions. If CD4 counts are normal or minimally abnormal (> 400/ul), there is little difference in treatment success rates between those who are co-infected and those who are infected with HCV alone.

### *Other Treatment Considerations*

Persons with chronic hepatitis C who continue to use alcohol are at risk for ongoing liver injury, and antiviral therapy may be ineffective. Therefore, strict abstinence from alcohol is recommended during antiviral therapy, and interferon should be given with caution to a patient who has only recently stopped alcohol abuse. Typically, a 6-month abstinence is recommended for alcohol abusers before starting therapy; such patients should be treated with the support and collaboration of alcohol abuse treatment programs.

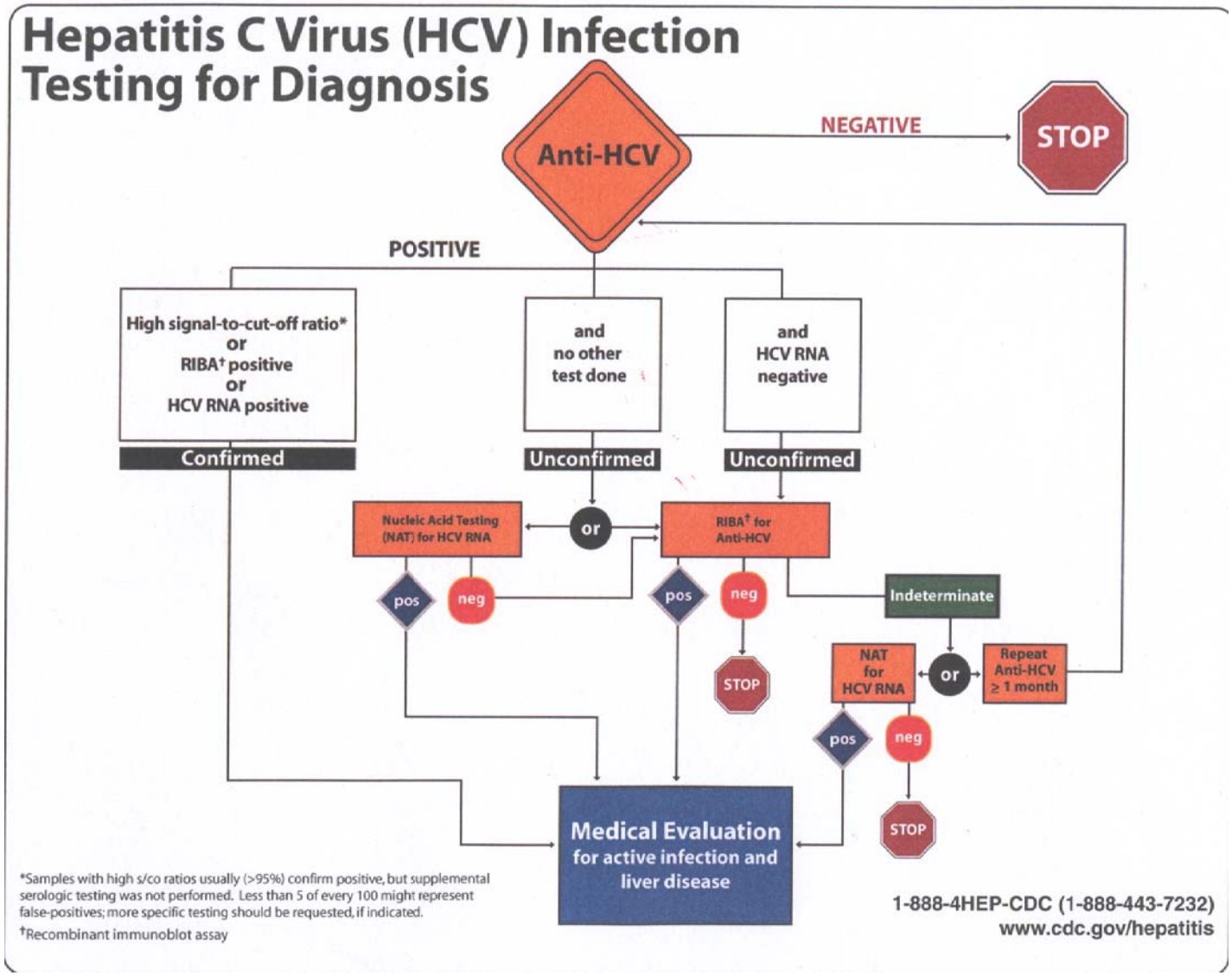
Although there is limited experience with antiviral treatment for chronic hepatitis C of persons who are recovering from long-term injection drug use, there are concerns that interferon therapy could be associated with relapse into drug use, both because of its side effects and because it is administered by injection. There is even less experience with treatment of persons who are active injection drug users, and an additional concern for this group is the risk for reinfection with HCV. Although a 6-month abstinence before starting therapy also has been recommended for injection drug users, additional research is needed on the benefits and drawbacks of treating these patients. Regardless, when patients with past or continuing problems of substance abuse are being considered for treatment, such patients should be treated only in collaboration with substance abuse specialists or counselors. Patients can be successfully treated while on methadone maintenance treatment of addiction.

Because many co-infected patients have conditions or factors (such as major depression or active illicit drug or alcohol use) that may prevent or complicate antiviral therapy, treatment for chronic hepatitis C in HIV-infected patients should be coordinated by health care providers with experience in treating co-infected patients or in clinical trials. It is not known if maintenance therapy is needed after successful

therapy, but patients should be counseled to avoid injection drug use and other behaviors that could lead to re-infection with HCV and should continue to abstain from alcohol.

### *Infections in Infants and Children*

The average rate of HCV infection among infants born to women co-infected with HCV and HIV is 14% to 17%, higher than among infants born to women infected with HCV alone. Data are limited on the natural history of HCV infection in children, and antiviral drugs for chronic hepatitis C are not FDA-approved for use in children under aged 18 years. Therefore, children should be referred to a pediatric hepatologist or similar specialist for management and for determination for eligibility in clinical trials.


Hepatitis C Virus (HCV) Infection
Testing for Diagnosis
Anti-HCV
NEGATIVE
STOP
POSITIVE
High signal-to-cut-off ratio*
or
RIBA† positive
or
HCV RNA positive
Confirmed
and
no other
test done
Unconfirmed
and
HCV RNA
negative
Unconfirmed
Nucleic Acid Testing
(NAT) for HCV RNA
or
RIBA† for
Anti-HCV
pos
neg
pos
neg
STOP
Indeterminate
NAT
for
HCV RNA
or
Repeat
Anti-HCV
≥ 1 month
pos
neg
STOP
Medical Evaluation
for active infection and
liver disease
*Samples with high s/co ratios usually (>95%) confirm positive, but supplemental serologic testing was not performed. Less than 5 of every 100 might represent false-positives; more specific testing should be requested, if indicated.
†Recombinant immunoblot assay
1-888-4HEP-CDC (1-888-443-7232)
www.cdc.gov/hepatitis

# Reference for Interpretation of HCV Test Results

| If Your HCV Test Result Is: | | | Interpretation | | Action |
|---|---|---|---|---|---|
| | Supplemental Test | | | | |
| Anti-HCV Screening Test*† | RIBA† | or HCV RNA | Anti-HCV | HCV Infection | Additional Testing or Evaluation |
| Negative | Not Needed | Not Needed | Negative | None | No |
| Positive | Not Done | Not Done | Not Known | Not Known | Supplemental Anti-HCV (RIBA) or HCV RNA |
| Positive | Not Done | Negative | Not Known | Not Known◆ | Supplemental Anti-HCV (RIBA) |
| Positive (high s/co ratio§) | Not Done | Not Done | Positive | Past/Current | Evaluate for chronic infection and liver disease |
| Positive | Negative | Not Needed | Negative | None | No |
| Positive | Positive | Not Done | Positive | Past/Current | Evaluate for chronic infection and liver disease |
| Positive | Positive | Negative | Positive | Past/Current | Repeat HCV RNA |
| Positive | Positive/not done | Positive | Positive | Current | Evaluate for chronic infection and liver disease |
| Positive | Indeterminate | Not Done | Indeterminate | Not Known | Test for HCV RNA or repeat Anti-HCV testing |
| Positive | Indeterminate | Positive | Indeterminate | Current | Evaluate for chronic infection and liver disease |
| Positive | Indeterminate | Negative | Negative | None | No |

* EIA - enzyme immunoassay or CIA - enhanced chemiluminescence immunoassay

† Recombinant immunoblot assay, a more specific anti-HCV assay

◆ Single negative HCV RNA result cannot determine infection status as persons might have intermittent viremia.

§ Samples with high s/co ratios usually (>95%) confirm positive, but supplemental serologic testing was not performed. Less than 5 of every 100 might represent false-positives; more specific testing should be requested, if indicated.