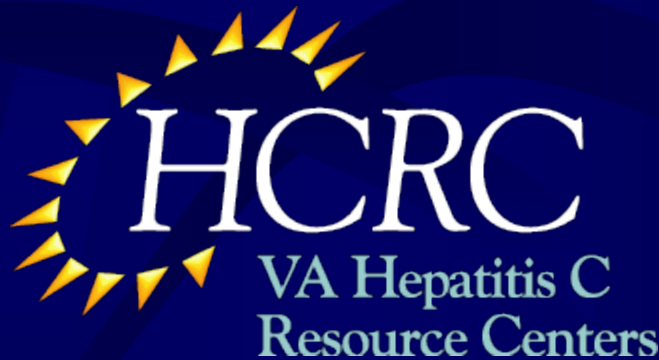


Welcome to the Hepatitis C Education Class



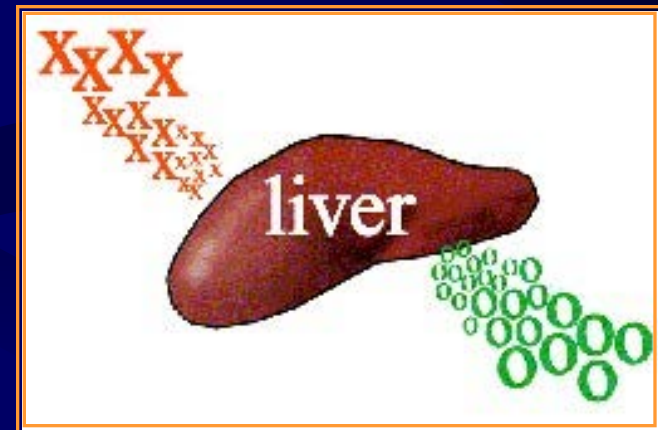
Department of
Veterans Affairs

Topics of the Class

- Your liver
- Types of hepatitis
- How hepatitis C is spread
- How to protect your liver
- Treatment for hepatitis C

What is the Liver?

- Makes chemicals that your body needs to stay healthy
- Removes waste products and other harmful substances from your blood
- Guards against infection



The Liver is a Factory

- Builds and converts proteins and sugars
- Stores vitamins, sugars, fats and other nutrients
- Releases chemicals and nutrients into the body when needed

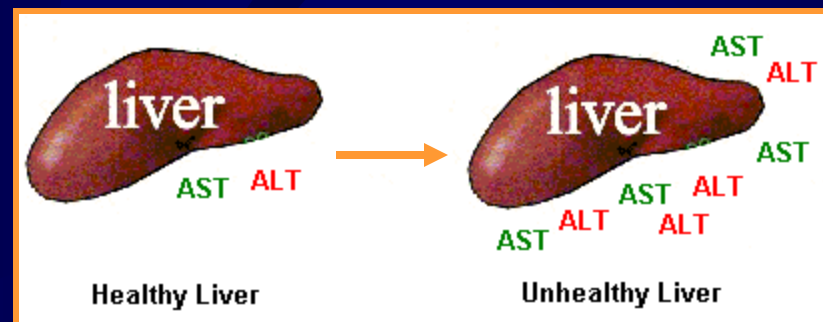
What is Hepatitis?

- “Hepatitis” means inflammation of the liver
- Can be caused by:
 - Genetic diseases
 - Medications (including over-the-counter)
 - Alcohol
 - Hepatitis viruses (A,B,C,D,E)



What Are Liver Enzymes?

- Chemicals that your liver uses to do its work
- Healthy liver:
 - the level of enzymes in your blood is normal
- Unhealthy liver:
 - the level of enzymes can be higher than normal



Hepatitis A

- Spread through contaminated food and water
- Vaccine available to prevent hepatitis A

A



Hepatitis B

- Spread through blood-blood contact
- Also transmitted through sex
- Vaccine available to prevent hepatitis B

B



Hepatitis C

- Identified in 1989
- Blood test became available in 1992
- Used to be known as “non-A, non-B” hepatitis
- Spread through blood-to- blood contact
- **No vaccine available to prevent hepatitis C**

C



Hepatitis C

- About 3 million Americans infected
- About 170 million infected worldwide
- Many do not experience symptoms



Who Should Be Tested for Hepatitis C?



- People with risk factors for hepatitis C
- Those who wish to be tested

How Do People Become Infected With Hepatitis C?

High Risk:

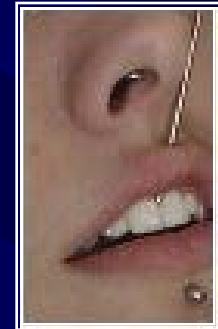
- **Blood products**
 - Blood transfusions before 1992
 - Other blood products before 1987
 - Current transfusions no longer a major risk factor
- **Injection (IV) drug use** – 60% of all new infections



How Do People Become Infected With Hepatitis C?

Lower Risk:

- Snorting cocaine or other drugs
- Occupational exposure
- Body piercing & acupuncture with unsterilized needle
- Tattooing



How Do People Become Infected With Hepatitis C?

Lower Risk:

- From pregnant mother to child
- Non-sexual household contacts (rare)
 - Sharing razors and/or toothbrushes
- Sexual transmission
 - Low risk in monogamous relationship
- Unknown

What About Sex?

- Sexual transmission is not very likely, BUT it is still possible
- If you have more than one sex partner, use latex condoms
- If you have one long-term sex partner, you do not necessarily need to change your sex habits

Hepatitis C is NOT Spread By:

- Sneezing
- Coughing
- Food or water
- Sharing drinking glasses or eating utensils
- Handshakes
- Holding hands
- Hugging
- Kissing on the cheek
- Playing with children
- Donating blood

How Can You Prevent the Spread of Hepatitis C?

- Cover open wounds
- Tell people not to touch your blood
- Clean blood spills yourself or inform others to use latex gloves
- Dispose of needles/materials properly
- **Do not inject drugs**



How Can You Prevent the Spread of Hepatitis C?

- Avoid sharing contaminated articles
 - Razors, toothbrushes, or other personal care items
- Inform healthcare professionals/others
- Do not donate blood, body organs, tissues or semen
- Practice safe sex



How Will You Know if You Have Hepatitis C?

- Many people have no symptoms of the virus
- If you do have symptoms:
 - Fatigue
 - Discomfort in the liver area
 - Loss of appetite
 - Aching joints
 - Trouble sleeping
 - Depression
- The only way to know if you have hepatitis c is to have a blood test

How is Hepatitis C Diagnosed?

- Blood testing
 1. Hepatitis C antibody test
 2. Hepatitis C PCR test to find virus in blood
- Liver function tests



What is Your Hepatitis C Genotype?

6 different genotypes of hepatitis C



- Like different breeds of dog
- Genotype 1:
 - Most common in U.S.
- Genotypes 2 & 3:
 - Less common

Why Should You Be Concerned About Hepatitis C?

- Hepatitis C causes serious problems in some patients
 - Fibrosis
 - Cirrhosis
 - Advanced liver disease
 - Hepatocellular carcinoma (liver cancer)

Fibrosis

- The beginning of scarring
- Caused by infection, inflammation, or injury
- Can prevent the liver from working well
- Can lead to permanent scarring (cirrhosis)

Cirrhosis

- Pronounced “sir-o-sis”
- Means “scarring of the liver”
- At risk for liver failure and liver cancer
- Requires close medical follow-up



Healthy Liver



Liver with Cirrhosis

Advanced Liver Disease

- Fatigue
- Difficulty thinking clearly or concentrating
- Yellow jaundice
- Swelling
- Fluid in the abdomen
- Gastrointestinal bleeding
- Poor blood clotting

Hepatocellular Carcinoma

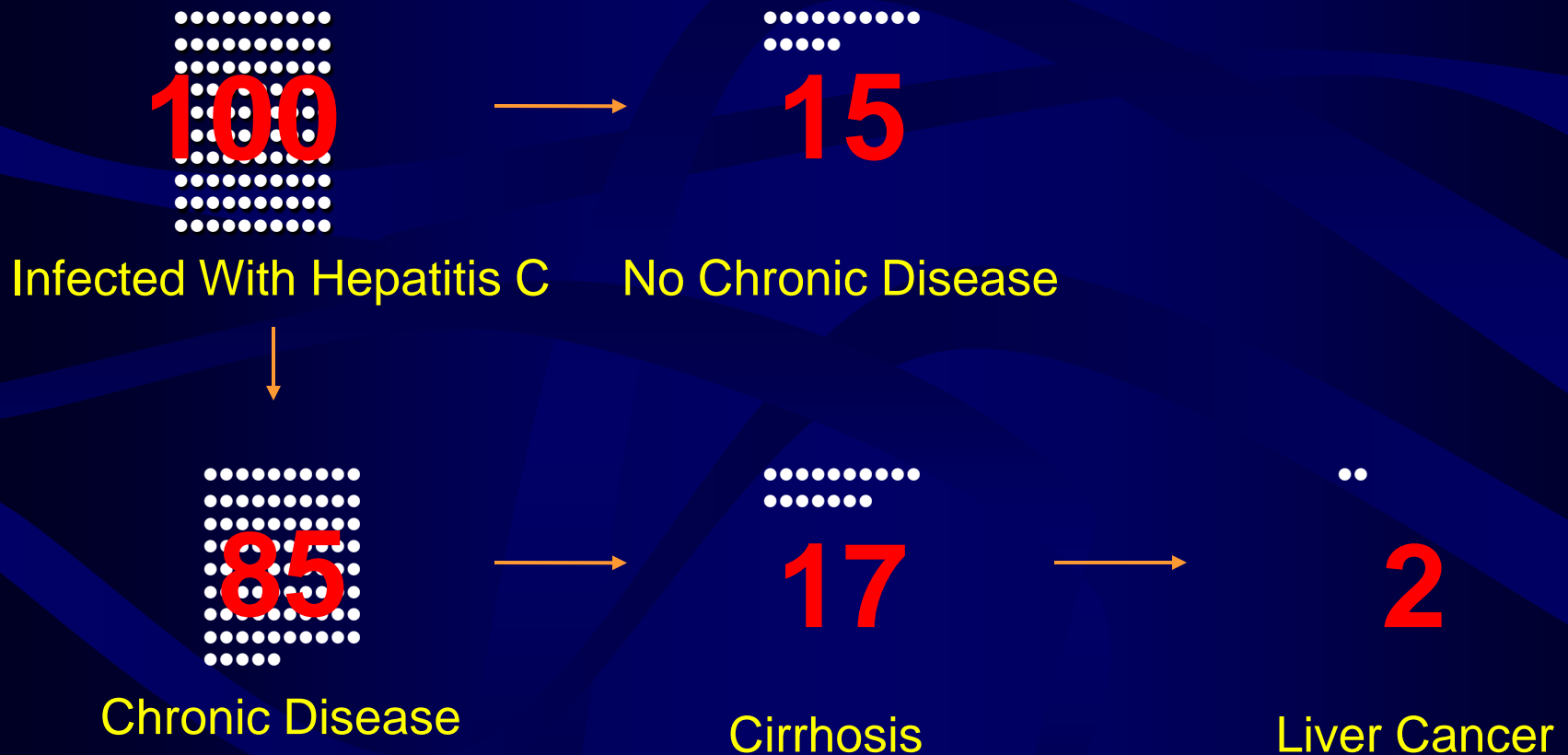
- Most common type of liver cancer
- Chronic hepatitis C increases the risk
- Treated with surgery, medications or liver transplant



Liver Transplant

- May be needed for patients who develop liver failure or liver cancer
- About 50% of all U.S. liver transplants result from liver damage caused by hepatitis C
- *Most patients with hepatitis C will never need a liver transplant*

What Happens to People With Hepatitis C Virus?



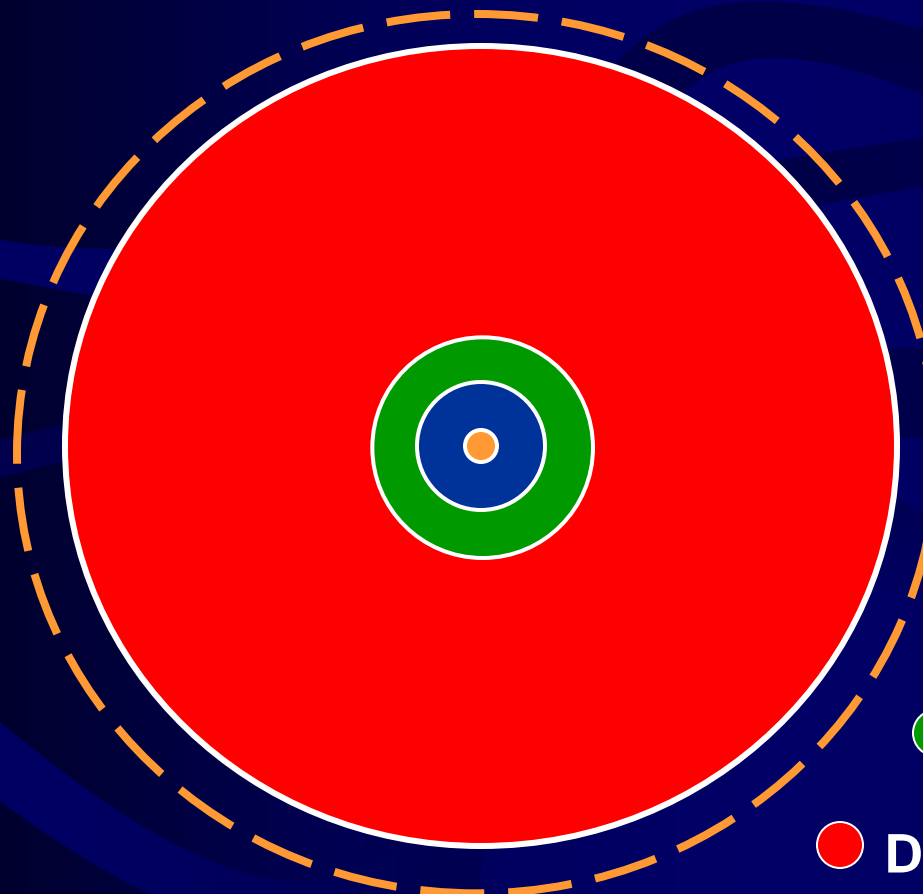
How Will You Know if You Have Problems from Hepatitis C?

- **Blood tests**
 - Can be normal even with liver damage
- **Liver biopsy**
 - Only way to determine the amount of scarring
 - Small risk of complications and very few side effects
 - Should be free of alcohol and street drugs



What About Alcohol?

Chance Of Getting Cirrhosis



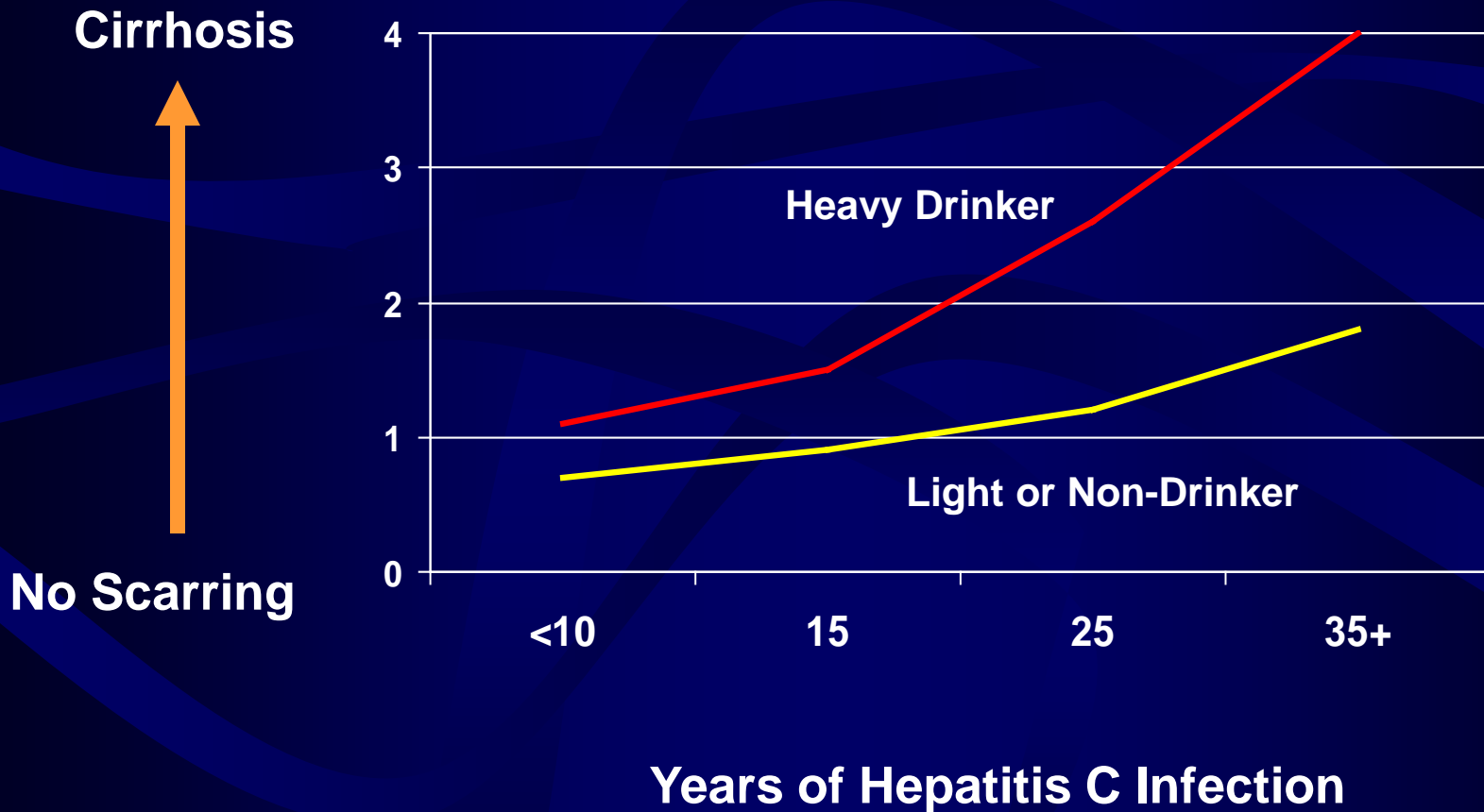
● Non-Drinker

● Hepatitis C Non-Drinker

● Drinker Without Hepatitis C

● Drinker With Hepatitis C

Effect of Alcohol on Liver Scarring



With Hepatitis C, You Should:



- *Avoid all alcohol*
- Be careful with all medications, including over the counter and herbal medications
- Tell all health care providers that you have hepatitis C

Hepatitis C & HIV Co-Infection

These viruses are spread in similar ways but are very different diseases

HIV

- Spread through blood and sexual contact
- Over time makes it hard for your body to fight off dangerous infections
- Can be treated BUT there is no cure

Hepatitis C

- Spread through blood only
- Over time can cause cirrhosis and liver cancer
- There is a cure BUT it's not effective in all patients

All patients with hepatitis C should be tested for HIV

Those With Hepatitis C Should

- Take care not to spread hepatitis C to others
- Be vaccinated for hepatitis A and hepatitis B
- Discuss treatment options with a knowledgeable medical professional



What Medications to Avoid?

- acetaminophen (**Tylenol**® and others): no more than four extra strength or six regular strength tablets per day
- ibuprofen and other anti-inflammatory medications (**Motrin**®, **Advil**®, **Aleve**®, and others)
 - Hepatitis C patients without cirrhosis may take the recommended dose on bottle
 - Hepatitis C patients with cirrhosis should NOT take any

What About Vitamins and Herbs?

- **Iron supplements not recommended**
 - They may increase the rate of liver scarring
- **Milk thistle** is safe, BUT not shown to improve liver disease
- Talk with your medical care provider before starting any new medication or supplement



Treatment of Chronic Hepatitis C

Goals of Treatment

- Clear all the hepatitis C virus from the body
("sustained response")
- Slow or stop damage to the liver
- Help decrease symptoms

What Treatment is Available?

- Interferon
 - Given by shot, usually 3 times a week
- Pegylated interferon
 - Long-acting, taken once a week
- Combination therapy
 - Interferon (standard or pegylated) taken with ribavirin
 - Ribavirin is a pill taken twice daily



Does Treatment Work?

- Interferon alone:
 - 10 – 15% chance of clearing the virus from the blood
- Interferon & ribavirin:
 - Up to 40% chance of clearing the virus
- Pegylated interferon alone:
 - About the same as interferon & ribavirin 40%
- Pegylated interferon & ribavirin:
 - Up to 50% chance of clearing the virus

During Treatment

- Medications taken for either 6 or 12 months
- Blood testing required 2 to 3 times the first month, then every 4 weeks
- Clinic visits every 1 month
- Interferon must be refrigerated
- We must have a way to contact you

Side Effects of Interferon & Ribavirin

Common Side Effects:

- Flu-like symptoms
 - Headache
 - Fatigue
 - Muscle & joint aches
 - Fever, chills
- Psychiatric symptoms
 - Depression
 - Difficulty sleeping
 - Difficulty concentrating
 - Irritability

Side Effects of Interferon & Ribavirin

Less Common Side Effects:

- May occur from the beginning:
 - Upset stomach, diarrhea
 - Decreased blood counts
 - Skin irritation from shots
- May occur later in treatment:
 - Hair loss
 - Weight loss
 - Thyroid problems

Disadvantages of Treatment

- Side effects
- Other medical conditions can be made worse
- Patients with severe mental health problems cannot be safely treated
- Ribavirin can cause severe birth defects if either parent is taking the medication
 - *Two forms of reliable birth control required*

Plan & Commit to Your Therapy

- Treatment can disrupt your life
 - Some patients have to stop working
 - Have a financial plan and a social support network in place
 - Consider putting off major life events during treatment
 - Not taking medications on time can decrease your chance of clearing the virus from your blood
 - Your provider will need to meet with you regularly during your treatment



Complementary Therapies

- Aromatherapy
- Massage therapy
- Meditation and visualization
- Yoga



Living With Hepatitis C

Maintain a healthy life outlook.

Live your life!



Education & Resources About Hepatitis C

- **VA Hepatitis C Website**
 - <http://www.hepatitis.va.gov>
- **Centers For Disease Control & Prevention**
 - 1-888-4 HEPCDC
 - <http://www.cdc.gov/ncidod/diseases/hepatitis>
- **National Institutes Of Health**
 - <http://health.nih.gov>
- **Support Groups**

Acknowledgements

VA Hepatitis C Resource Center Program

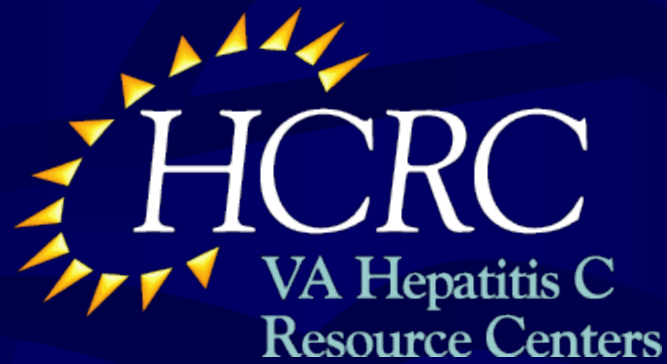
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**Thank You for Attending
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