

# Welcome to the Hepatitis C Education Class



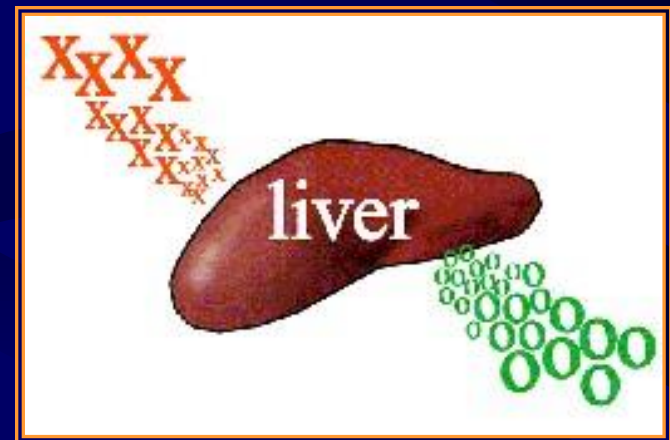
Department of  
Veterans Affairs

# 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

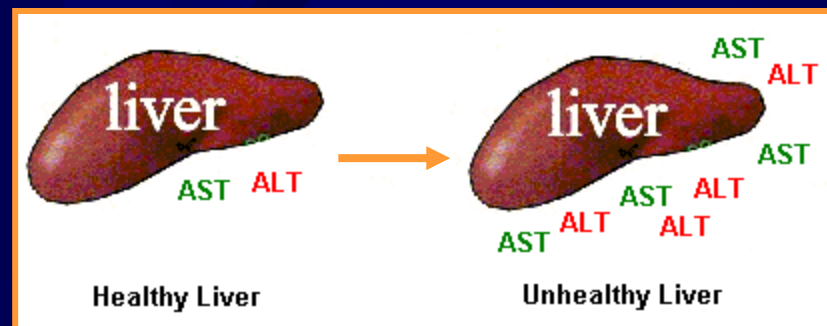
# What is Hepatitis?

- “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

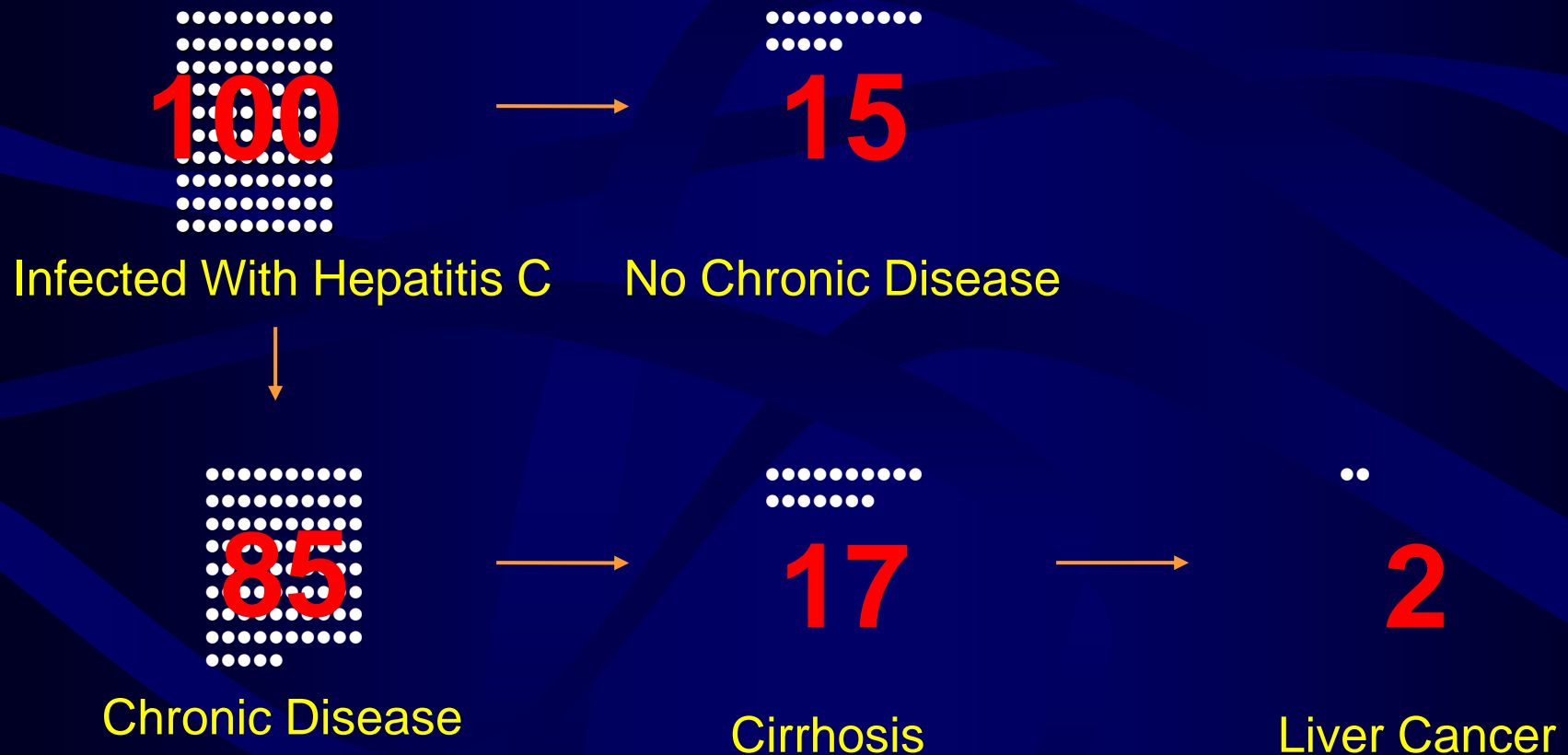
- Most common type of liver cancer
- Chronic hepatitis C increases the risk
- Treated with surgery, medications or liver transplant



# 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?

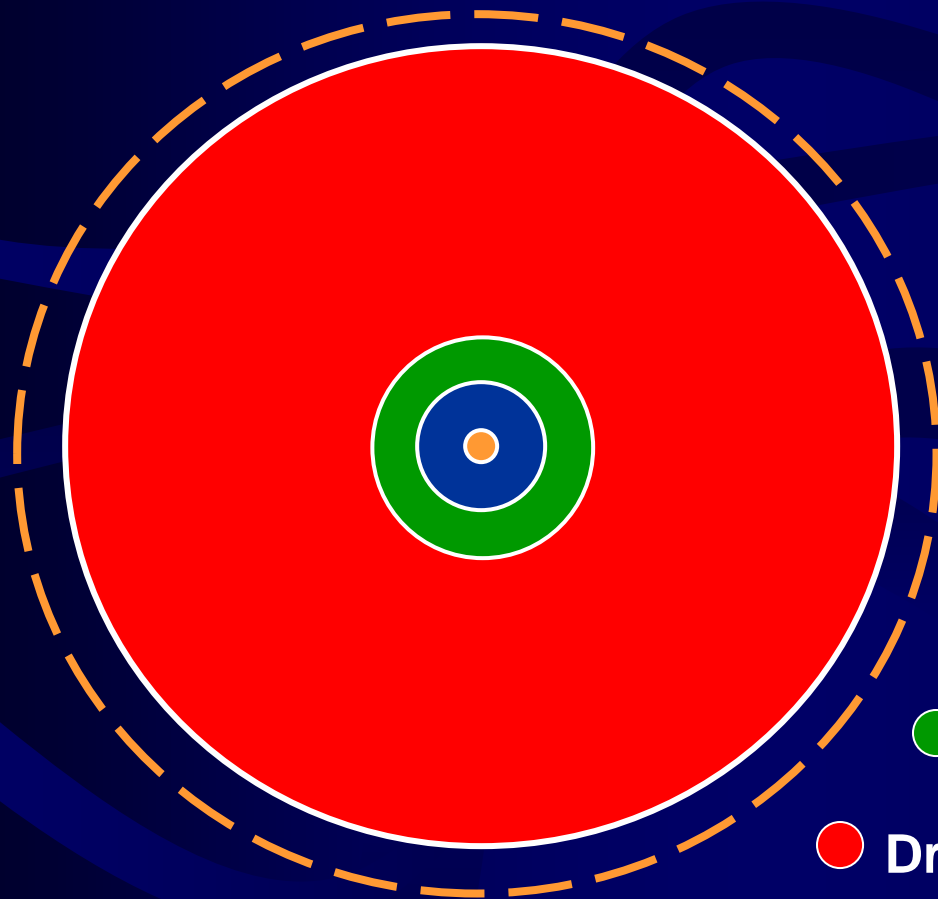


# How Will You Know if You Have Problems from Hepatitis C?

- **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**

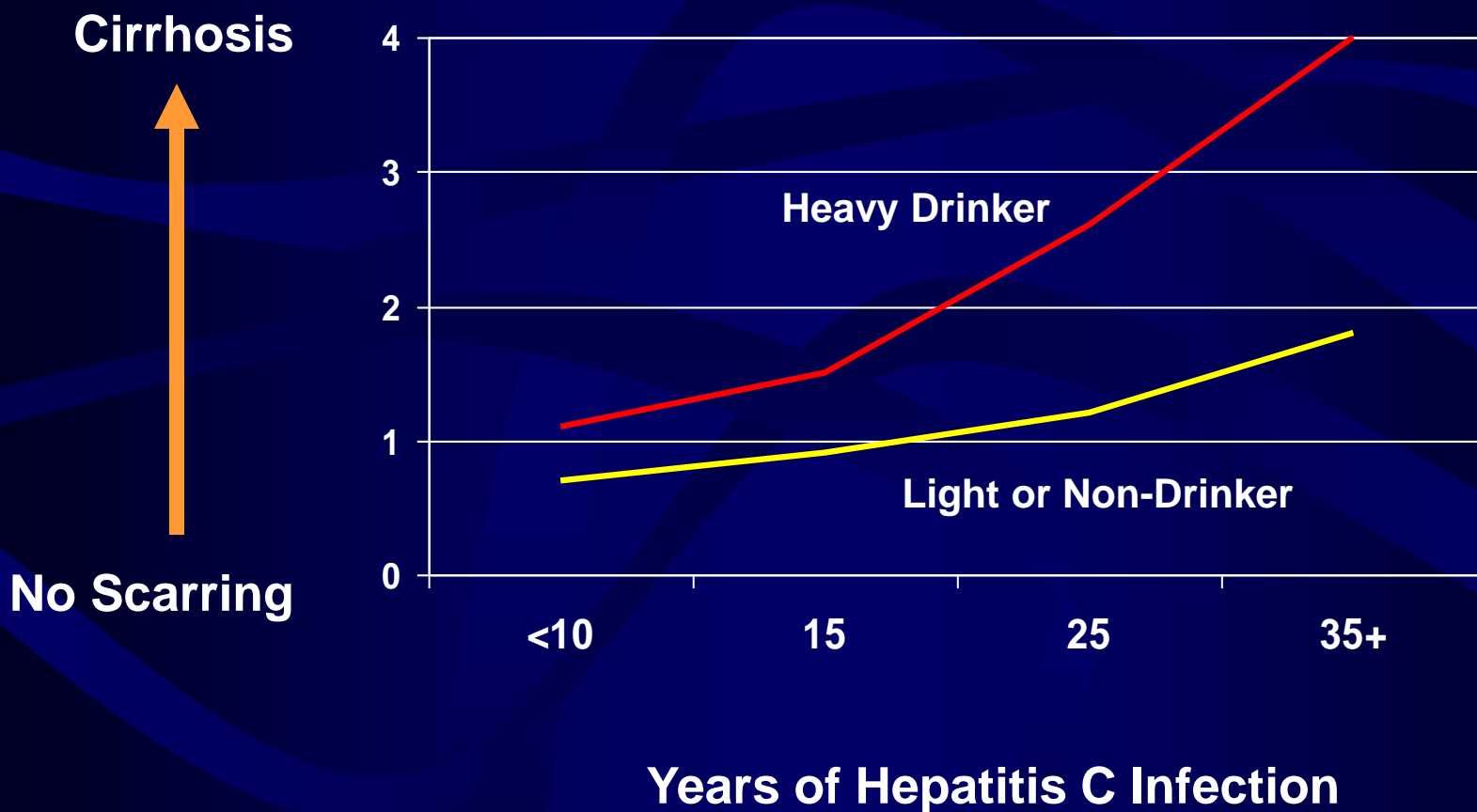
● Non-Drinker

● 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

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**Thank You for Attending  
Class**



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