

# HEPATITIS C CONDITIONS OUTSIDE OF THE LIVER:

## Diabetes and Heart Disease

### Hepatitis C: It's About More than Liver Disease

- Diabetes and heart disease are two of the most common chronic health conditions affecting people living in the United States (US). In fact, these are both major causes of death among Americans.
- There is growing evidence that infection with the hepatitis C virus (HCV) is associated with both of these conditions. This fact sheet provides an overview of these conditions in the context of chronic HCV.

## DIABETES



### What is it?

Diabetes is a disease that occurs when the body cannot control the amount of sugar (also called glucose) in the blood. People with diabetes have problems related to a hormone called insulin, and this leads to blood sugar levels that are too high.

Type 2 diabetes is the most common form of diabetes and is usually diagnosed in adults. It occurs when the body doesn't respond to insulin normally, leading to insulin resistance. Type 1 diabetes occurs when the body completely fails to make insulin and is often diagnosed in children and young adults. This fact sheet focuses on the relationship between HCV and Type 2 diabetes.

The link between diabetes and HCV is still being studied. It is believed that HCV interferes with the way the body uses insulin, which increases the risk for developing diabetes.<sup>1</sup>

### How common is it?

**13-30%**

of individuals with HCV also have diabetes.<sup>2-3</sup>

### Symptoms

Symptoms of diabetes vary from person to person and depend on how high a person's blood sugar is. Symptoms may include:

- Frequent urination
- Increased thirst or hunger
- Blurred vision
- Unexplained weight loss
- Feeling tired
- Dry skin or skin infections

### Complications

If diabetes is not controlled, it can lead to serious health problems such as:

- Heart Disease
- Stroke
- Vision problems, including cataracts & vision loss
- Nerve damage, especially in the legs and feet
- Kidney disease, which may require dialysis or kidney transplant

### Diagnosis

Diabetes is diagnosed by performing a blood test to measure levels of blood sugar.

### Treatment\*

Managing diabetes includes many factors. Some treatment plans might require a self-check of blood sugar levels several times a day. This can be done with an at-home monitoring device.

Other treatment strategies may include:

- Medication, which can be a pill or injected with a syringe
- Diet plans to help maintain healthy blood sugar levels
- Increasing physical activity through exercise



In addition, treating for HCV infection may improve the body's ability to control diabetes.<sup>4</sup>

\* All treatment should be done in consultation with a licensed healthcare provider

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## HEART DISEASE



### What is it?

Heart disease refers to several different health conditions that affect the way the heart and blood vessels function. Some examples include:

- Clogged blood vessels
- Abnormal heart beat
- Damaged heart muscle and/or valves



### How common is it?

Over 28 million people have been diagnosed with heart disease in the US, where it is the leading cause of death.<sup>5</sup>

**People with HCV are more than twice as likely to die from heart disease than people without HCV.<sup>6</sup>**

They also have a higher risk of stroke and clogged blood vessels.<sup>7</sup>

The relationship between HCV and heart disease is still being studied to understand why this connection exists.

### Complications

Heart disease can lead to serious conditions including heart attack, stroke, heart failure, and death.

### Symptoms

The signs of heart disease vary by condition. Some of the more common symptoms include:

- Chest pain or discomfort
- Shortness of breath
- Feeling weak or dizzy
- Heart palpitations
- Fatigue

### Diagnosis

Diagnosis of heart disease often involves several components such as:

- Physical examination
- Review of family health history
- Electrocardiogram (EKG)
- Scans of the heart (x-ray, MRI, CT scan)
- Blood tests
- Monitoring the heart during exercise (stress test)

### Treatment\*

Treatment for heart disease may involve the following:

- Lifestyle changes (eat a healthy diet, exercise regularly, quit smoking)
- Medications
- Surgery or other medical procedures

There is growing evidence that HCV treatment can reduce the risk for heart disease among HCV-infected individuals.<sup>6</sup>

*\* All treatment should be done in consultation with a licensed healthcare provider.*



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2. Younossi Z, et al. (2016). Extrahepatic manifestations of hepatitis C: a meta-analysis of prevalence, quality of life, and economic burden. *Gastroenterology*, 150(7): 1599-1608.  
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