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**LIVER WELLNESS<sup>®</sup>**

YOUR LIVER AND YOUR HEALTH

# Diabetes Liver Screen

## Non-Alcoholic Fatty Liver Disease (NAFLD)



**PROF. SUZANNE NORRIS**

[www.liverwellness.ie](http://www.liverwellness.ie)

## Diabetes Liver Screen and Non-Alcoholic Fatty Liver Disease (NAFLD)

### Why do Diabetes Patients need a Liver Screen?

There is a silent epidemic of Non-Alcoholic Fatty Liver Disease (NAFLD) in Ireland and patients with type 2 diabetes, obesity, and high cholesterol are at greater risk of developing this disease which, if undiagnosed and left untreated, may lead to cirrhosis of the liver.



**International Clinical Practice Guidelines now recommend that screening for NAFLD should be part of routine work-up in patients with type 2 diabetes, obesity, and metabolic syndrome.**

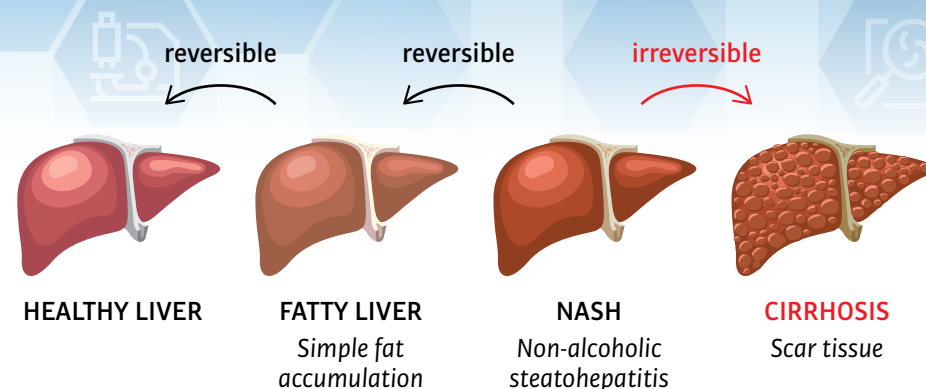
### Why is the liver important?

Your liver is a vital organ that performs many essential functions. It's the largest solid organ in the body, and is located under your rib cage on the upper right side. Your liver processes everything you eat, drink, breathe, and absorb through your skin. It turns nutrients into energy your body can use, and removes harmful substances from your blood.

### What is Non-Alcoholic Fatty Liver Disease?

Fat can build up in the liver due to alcohol consumption and by increasing body weight. When fat makes up more than 10% of the liver's weight, it is called Fatty Liver Disease. If the extra fat is not caused by drinking too much alcohol, the disease is called Non-Alcoholic Fatty Liver Disease (NAFLD).

### The spectrum of non-alcoholic fatty liver disease



### Am I at risk for Non-Alcoholic Fatty Liver Disease?

People with certain medical conditions are at higher risk for developing NAFLD, including:

- **Type 2 Diabetes**
- **Obesity**
- **High Cholesterol**
- **High Blood Pressure**
- **High Triglycerides**

### Do many people have Non-Alcoholic Fatty Liver Disease?

Yes, studies indicate that approximately 25% of the adult population in most countries in Europe and the US have NAFLD, and the incidence is increasing in parallel

with increasing rates of diabetes and obesity.

In Ireland, approximately 225,000 people have diabetes (mostly type 2 diabetes), and up to 80% of patients with type 2 diabetes have fat in their liver. Two thirds of diabetes patients older than 50 years are estimated to have NAFLD with advanced liver scarring or fibrosis.

### What happens if I have Non-Alcoholic Fatty Liver Disease for a long time?

If someone has NAFLD for a long time, the liver can become damaged from scarring of the liver (fibrosis). If this involves all of the liver and becomes irreversible, it is called cirrhosis.

Patients with type 2 diabetes who do not drink alcohol can still develop cirrhosis



because of fat related inflammation and scarring. This subtype of NAFLD is called NASH, or Non-Alcoholic Steatohepatitis, and has a higher risk for liver scarring and progression to liver failure compared to patients who have simple fat in their liver with no inflammation.

NAFLD and NASH do not always cause cirrhosis; however, over 20–30 years, cirrhosis can occur. Cirrhosis is a risk factor for liver failure and liver cancer.

### **What are the symptoms of Non-Alcoholic Fatty Liver Disease?**

Like many liver diseases, NAFLD and NASH are “silent” diseases, which means that people who have them often do not feel sick until they have significant liver damage. Because the awareness of the risk of liver disease due to NAFLD in patients with diabetes is low, patients may not be screened for liver problems. Sometimes, NAFLD is diagnosed when tests are done for other reasons (medical insurance, occupational health screen). NAFLD

often causes no symptoms. If symptoms do occur, they tend to be non-specific such as fatigue, a dull ache in the upper right abdomen, sleep apnoea, and achy joints.

### **What tests can be done to check if I have NAFLD?**

A liver ultrasound scan is often the first test to diagnose NAFLD but it cannot detect how much scar tissue (fibrosis) has developed.

Liver blood tests (ALT, AST) may be abnormal in NAFLD patients but research has shown that up to 80% of patients with NAFLD and liver damage can have normal liver blood tests. So liver blood tests are **not** a sensitive test for screening diabetic patients for NAFLD.

A liver biopsy is an accurate test but may be painful.

A FibroScan® assessment is a painless non-invasive alternative to detecting liver fat and fibrosis (scarring). International Clinical Guidelines

## **FibroScan®**



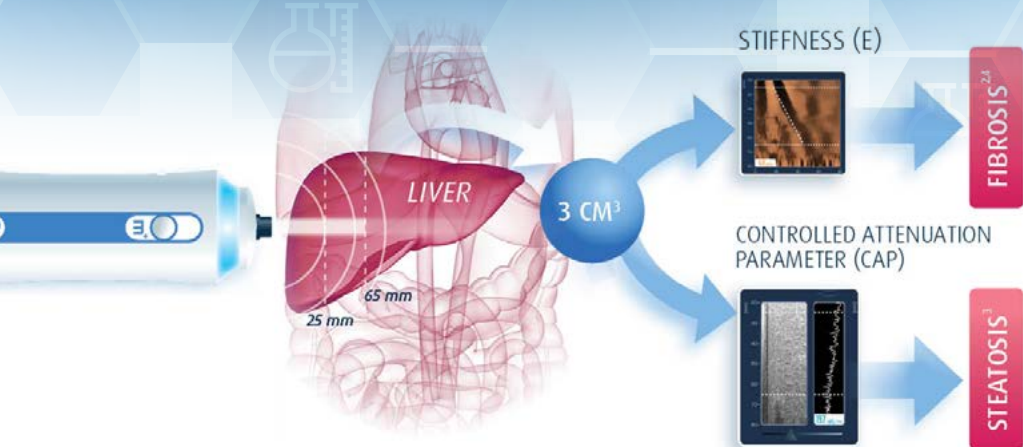
recommended the FibroScan® assessment as a validated non-invasive procedure for the identification of patients at risk of NAFLD.

### **What is a FibroScan® Liver Assessment?**

FibroScan®, with its dedicated probes, is a medical device to measure liver stiffness/elasticity and is a tool to help diagnosis. It is a painless and non-invasive method for evaluating fibrosis or scarring in the liver. It uses ultrasound to create waves and measures the speed at which these waves are reflected by the liver. The wave speed is used to determine liver stiffness.

Results are presented as a number in kilopascals (kPa). The higher the figure, the stiffer and more scarred the liver has become. Results from the test should not be confused with fibrosis scores measured on other scoring systems such as liver biopsies. Because it is non-invasive, the scan can be repeated regularly without risk (unlike a liver biopsy). The examination also assesses the CAP or steatosis (amount of liver fat) on the same volume of tissue allowing simultaneous assessment of liver stiffness (fibrosis) and steatosis (CAP) in a single FibroScan® assessment.

FibroScan® examinations are performed by a highly skilled and



qualified nurse. An assessment may take up to 15 mins and patients are provided with the scan's result prior to leaving. Within two working days of a FibroScan® test, a Consultant Hepatologist will review the results of the scan and a signed report including recommendations where necessary, will be forwarded to the referring GP or consultant. Following a FibroScan® assessment, a follow-up appointment with a Consultant Hepatologist may be recommended.

#### **Where can I access a FibroScan® Assessment?**

FibroScan® Assessments can be accessed by referral through the Public Hospital System in Ireland and also

directly at some Private Hospitals, including the Blackrock Clinic and Beacon Hospital.

#### **What are the therapies for NAFLD?**

Weight reduction is the key factor in treating NAFLD. Studies have proven that losing 7–10% body weight reduces liver fat, reduces liver inflammation and liver scarring.

Patients with diabetes and or high cholesterol should control these conditions. Uncontrolled diabetes or high cholesterol can lead to progressive liver disease.

*It is recommended that patients with or at risk of liver disease should be referred for a FibroScan® Liver Assessment*

Book your FibroScan® online at: [www.liverwellness.ie/bookings](http://www.liverwellness.ie/bookings)

Referral Forms can be downloaded on: [www.liverwellness.ie](http://www.liverwellness.ie)

Phone bookings can be made at our contact number below.

#### **Liver Wellness®**

Suite 22, Beacon Consultants  
Clinic, Beacon Hospital,  
Sandyford, Dublin 18



#### **Liver Wellness®**

Suite 25, Blackrock Clinic,  
Rock Road,  
Co. Dublin



PH: 01-910 8901 / FAX: 01-969 5572 / E-mail: [info@liverwellness.ie](mailto:info@liverwellness.ie)

Web: [www.liverwellness.ie](http://www.liverwellness.ie)

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**Liver Wellness®**

Suite 22, Beacon Consultants  
Clinic, Beacon Hospital,  
Sandyford, Dublin 18



Beacon Hospital

**Liver Wellness®**

Suite 25, Blackrock Clinic,  
Rock Road, Co. Dublin



Blackrock Clinic

**PH: 01-910 8901 / FAX: 01-969 5572 / E-mail: [info@liverwellness.ie](mailto:info@liverwellness.ie)**

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