

# The **damaged** liver

The liver is an organ of vital importance and has the extraordinary **capacity of self-regeneration**.

However, a few things are too much, even for our livers:

## Dietary reasons

An unbalanced diet – rich in fat and sugar – can overuse the liver and disturb its functions.

## Alcohol consumption

Excessive alcohol consumption can cause chronic intoxication which may result in various liver diseases.

## Drugs

Some pharmaceuticals can be harmful for your liver, even drugs that you can buy without prescription (e.g. paracetamol).

## Other reasons for a damaged liver:

- Genetic reasons (metabolic disorders)
- Intoxications (poison, mushrooms, food, etc.)
- Illnesses (diabetes, virus infections, etc.)
- Obesity (BMI above 30)
- High cholesterol levels and others

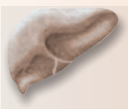
Among others, those factors may cause a **fatty liver**, which can lead to liver fibrosis and cirrhosis. The tissue damage associated with cirrhosis is irreversible.

### Fatty liver



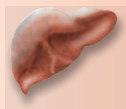
Deposits of fat causes liver enlargement.

### Liver fibrosis



Scar tissue forms.

### Cirrhosis



Growth of connective tissue destroys liver cells.

# Simepar™

Silymarin + B-group vitamins

## Simepar™ helps your liver

- To maintain and restore its normal function
- To eliminate toxins
- With a strong antioxidant effect

## Double Protection For Your Liver

### Treatment:

1 capsule 3 times daily

### Maintenance:

1 or 2 capsules daily



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## Double Protection For Your Liver



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Sometimes Your Liver  
Needs Support

# The healthy liver

# Simepar™

Double protection for your liver



## The liver

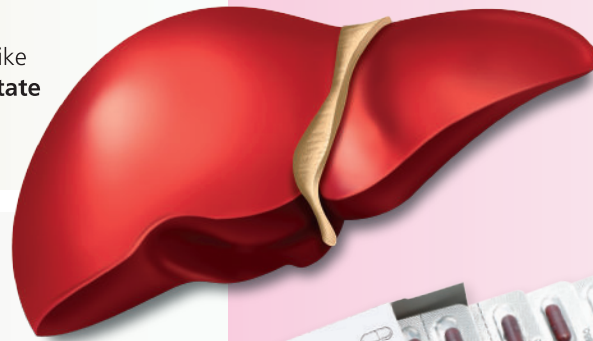
- is the largest internal organ in the human body and essential for survival
- plays a major role in numerous important functions in the human body such as:

## Simepar™ contains two components to help your liver:

- **Silymarin, a 100% natural extract of the milk thistle**
- **A combination of B-group vitamins (B<sub>1</sub>, B<sub>2</sub>, B<sub>3</sub>, B<sub>5</sub>, B<sub>6</sub>, B<sub>12</sub>)**

## Blood detoxification

The liver breaks up foreign compounds like toxins, drugs, alcohol, fats, etc. to **facilitate its excretion** through the urine.



## Bile secretion

The liver produces bile. Bile is stored in the gall bladder and upon eating it is discharged into the duodenum where it **supports the process of digestion**.



## Carbohydrate metabolism

The liver is responsible for the transformation of various substances into glucose (sugar) which **supplies us with energy all day long**. The liver also takes care of the breakdown of insulin and other hormones.

## Numerous other syntheses

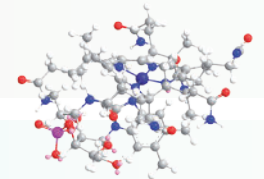
The liver plays an important part in the fat metabolism (cholesterol, triglycerides) and protein metabolism (amino acid synthesis).

## Silymarin:

The milk thistle has been known for thousands of years and extracts of this plant were used by ancient cultures to protect the liver and restore its function.

Nowadays the standardised extract Silymarin has been extensively tested and its effects are scientifically proven:

- Silymarin enhances the production of new liver cells to replace damaged old ones.<sup>1</sup>
- Silymarin protects the liver against toxic substances (poisoning mushrooms and drugs) by increasing the cell membrane stability and blocking the uptake of toxins.<sup>1</sup>
- Silymarin helps to protect the liver from free radical damage.<sup>1</sup>
- Silymarin has the potential to prevent some metabolic and toxic effects of alcohol on the liver.<sup>1,2</sup>



## Vitamin B complex:

Liver diseases and some causes of liver damage (alcohol, toxins) are often related to disturbances of the vitamin B metabolism and vitamin B deficiency.

- B-group vitamins provide conferment functions which are required for the protein and carbohydrate metabolism.<sup>3</sup>
- Sufficient vitamin B levels are required to ensure liver tissue renovation and detoxification.<sup>3</sup>
- Vitamin B deficiency can worsen liver diseases and can lead to serious complications.<sup>3</sup>

## References:

- 1 Wellington K et al. Silymarin: a review of its clinical properties in the management of hepatic disorders. *BioDrugs*. 2001;15(7):465–89.
- 2 Ferenci P et al. Randomized controlled trial of silymarin treatment in patients with cirrhosis of the liver. *J Hepatol*. 1989;9(1):105–14.
- 3 AHFS Drug Information 2002. Vitamin B complex. McEvoy GK, editor. Bethesda: American Society of Health-System Pharmacists. 2002:3531–44.