



Food Supplement for Hepatic insufficiency

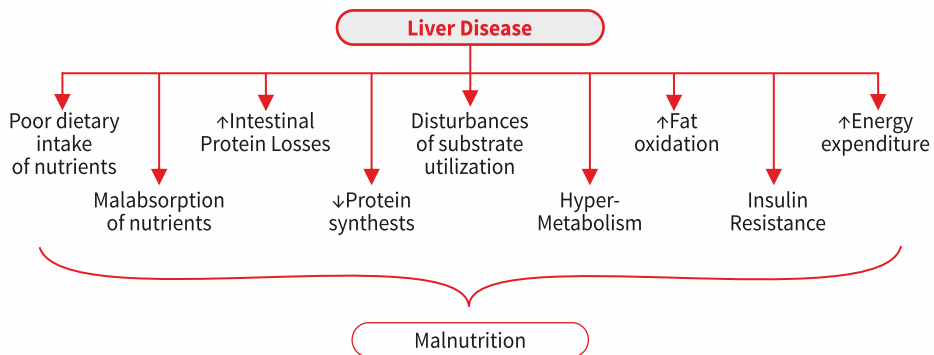
LAMINO-HEPA

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Role of Vitamins-Minerals in Liver¹:

- The liver plays a central role in the regulation of nutrition by trafficking the metabolism of nutrients and many factors disrupt this metabolic balances in liver ailments which leads to malnutrition.
- Malnutrition also tends to be more common in patients with advanced liver disease and Hepatic Encephalopathy (HE).
- Loss of proteins and minerals may result from complications of cirrhosis or from iatrogenic interventions such as the use of diuretics for the treatment of ascites and fluid retention as well as from the use of lactulose for the management of HE.
- Patients with End Stage Liver Disease are also vitamins and nutrients deficient due to malabsorption.

Factors contributing to malnutrition¹ :



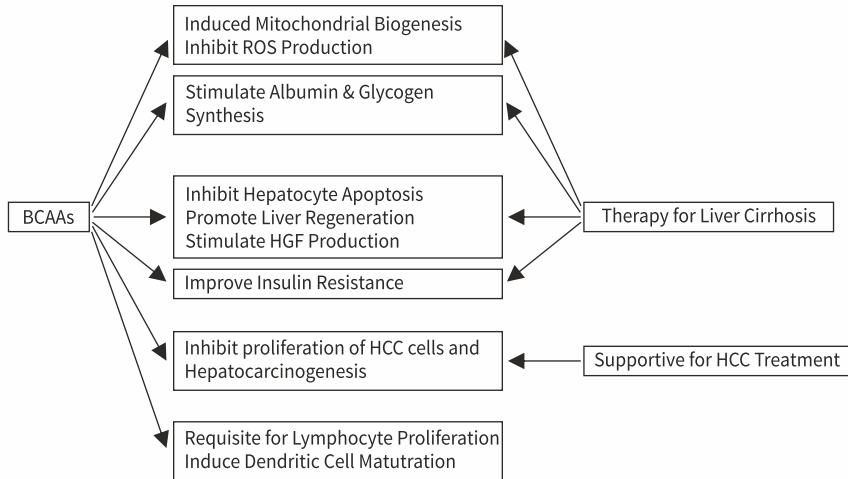
Impact of Nutritional Management in Liver Disease Patients²:



Branched Chain Amino Acids in Liver Disease³:

- BCAA supplementation in patients with advanced cirrhosis prevents progressive hepatic failure and improved surrogate markers and perceived health status.
- Treatment with BCAAs have a beneficial effect on patients with hepatic encephalopathy mainly by compensating decreased ratio of BCAAs to AAAs.
- BCAAs reduces protein loss, support protein synthesis and improves the nutritional status.

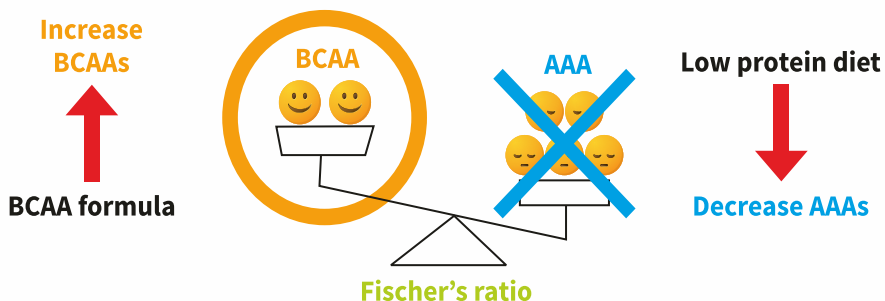
Mechanism of action of branched chain amino acids in liver diseases.



BCAAs: Branched chain amino acids;
ROS: Reactive oxygen species;
HGF: Hepatocyte growth factor;
HCC: Hepatocellular carcinoma;
AAA: Aromatic amino acids.

BCAA in Hepatic Encephalopathy⁴:

Abnormal, amino acids metabolism in Liver cirrhosis (LC) can be characterized by decreased concentration of BCAA and increased concentration of aromatic amino acids (AAA). In hepatic failure, the metabolism of AAA's and methionine is lowered, leading to elevated concentrations in the blood. In contrast in the muscles the catabolism of BCAA's is accelerated, resulting in a decrease in the concentration of BCAA's. Consequently, Fischer's ratio diminishes and the uptake of AA increased into brain. This increased uptake leads to an increase in number of neurotransmitters causing encephalopathy.



LAMINO-HEPA

Key Features:

- Lamino HEPA is a perfect blend of Vitamins and Minerals along with BCAA.
- BCAA supplement reduces Oxidative Stress by restoring mitochondrial function.
- Improves quality of life in patients with Liver Disease.
- Helps to maintain nutritional status.

Recommended for:

- Adjuvant Therapy in :
 - Non Alcoholic Fatty Liver Disease,
 - Hepatic Encephalopathy,
 - End Stage Liver Disease
- In Malnutrition caused by Liver Disease.

Recommended Usage:


As prescribed by Healthcare Professionals.


Reference:


1. Journal of Nutrition and Metabolism, 2010
2. Journal Of Clinical And Experimental Hepatology, 2014
3. World J Gastroenterology ; 19(43): 7620-7629-2013
4. World J. Med. Sci., 3 (2): 60-64, 2008

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 I am: _____

 Call me on: _____

 Mail me at: _____

Nutritional Information:

Nutritional Information per Serving of 30g sachet		
Item	Unit	Quantity
Energy	Kcal	115.2
Protein	g	3.45
Carbohydrate	g	21.3
Sugar	g	4.62
Dietary Fibre	g	0.6
Fat	g	1.8
Vitamins		
Vitamin A	mcg	173.1
Vitamin D	mcg	1.17
Vitamin E	mg	2.31
Vitamin K	mcg	8.31
Vitamin C	mg	13.8
Vitamin B1	mg	0.36
Vitamin B2	mg	0.36
Vitamin B6	mg	0.45
Vitamin B12	mcg	0.6
Niacinamide	mg	3
Folic Acid	mcg	46.2
Panthenic Acid	mg	1.17
Biotin	mcg	4.62
Minerals		
Calcium	mg	90
Phosphorus	mg	69
Magnesium	mg	18
Sodium	mg	34.8
Potassium	mg	98.1
Chloride	mg	128.1
Iron	mg	2.07
Zinc	mg	0.6
Copper	mg	0.24
Manganese	mg	0.45
Iodine	mcg	12.12
Selenium	mcg	10.2
Chromium	mcg	9.24
Molybdenum	mcg	10.2
Others		
Choline	mg	120
L-leucine	mg	249
L-valine	mg	147
l-isoleucine	mg	144
l-lysine	mg	210