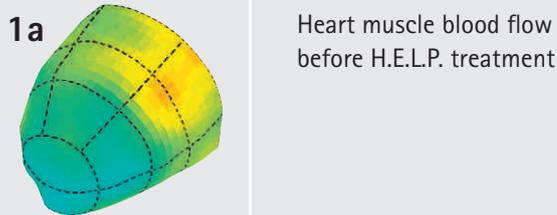


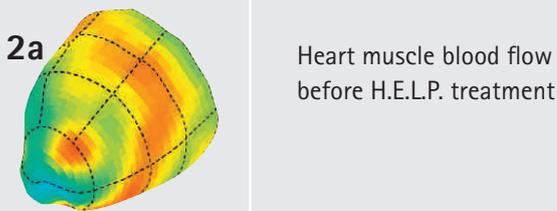
H.E.L.P. Apheresis with the Plasmat[®] Futura

H.E.L.P. increases cardiac blood flow

1. H.E.L.P. treatment

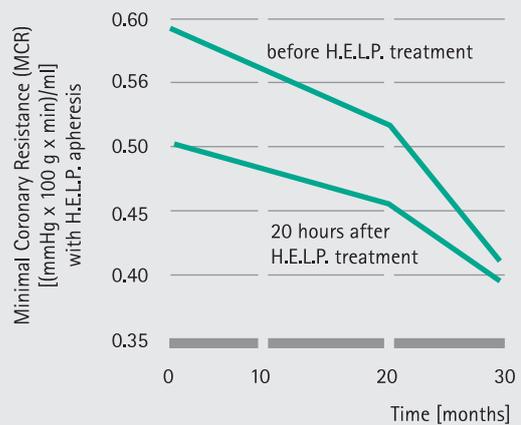


after 9 months of H.E.L.P.



The coronary blood flows were determined using Positron Emission Tomography (PET) following the infusion of adenosine for maximum vascular distension.

H.E.L.P. improves the regulation of vascular distension

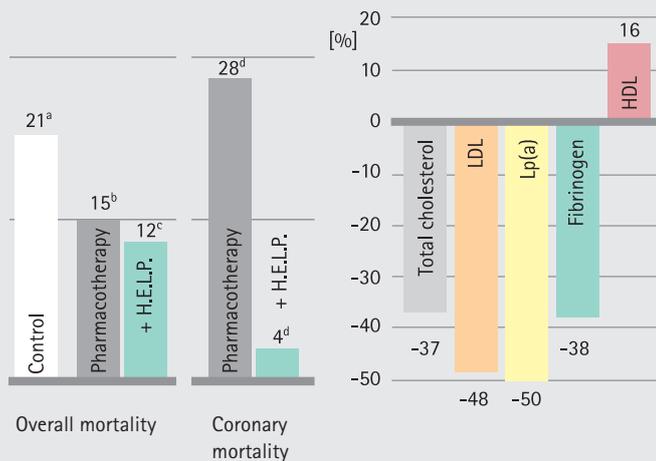


Evidence of the improved coronary perfusion as a result of chronic H.E.L.P. therapy is also provided by the reduction in Minimal Coronary Resistance (MCR) [Positron Emission Tomography]. [21]

H.E.L.P. therapy results in:

- Reduction of the lipoprotein level
- Reduction of the oxidative stress at the cellular level
- Reduction of the fibrinogen
- Reduction of the proinflammatory plasma proteins such as hsCRP and homocysteine
- Reduction of the cell adhesion molecules V-CAM-1, I-CAM and E-selectin
- Positive effect on the endothelial inflammation processes
- Positive effects on microvascular atherosclerosis

For a longer life and improved quality of life



Duration of treatment 5 years,
^an = 2223, ^bn = 2221,
^cn = 829, ^dn = 186 [35], [10]

Change in specific plasma constituents after 16 months of H.E.L.P. therapy [n = 44] [27]



H.E.L.P. has long-lasting effects:

- Secure data shows the reduction in the overall mortality of the patients undergoing H.E.L.P. apheresis. On average, H.E.L.P. patients have a longer life expectancy than patients with the same risk profile undergoing conventional therapy.
- The level of serum lipoproteins drops with lasting effect on a weekly average. Compared to patients not undergoing apheresis and when combined with the required drug therapy, the target values set by the specialist associations are almost completely achieved in the case of high-risk patients.

H.E.L.P. – High clinical effectiveness

As a result of the reduction of atherosclerosis risk factors (LDL, Lp(a), fibrinogen), in many cases the deposits in the vessels are also reduced. Deposited cholesterol is flushed out. As a result, the blood vessels often regain their original capacity to regulate vascular distension (see figure on left). The blood flow through the tissue improves. The patient feels "fitter" – and this is not just subjective.

Proinflammatory plasma proteins [24]

Marker	HELP
MCP-1	-15
ET-1	-25
LBP	-27
Lp-PLA ₂	-22
VCAM-1	-20
ICAM-1	-10
E-Selectin	-31
Fibrinogen	-65
Ox-LDL	-65
CRP	-65