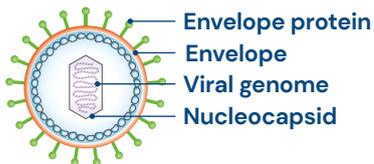


**focus**

# The strength of a complementary treatment plan in Chronic EBV Reactivation



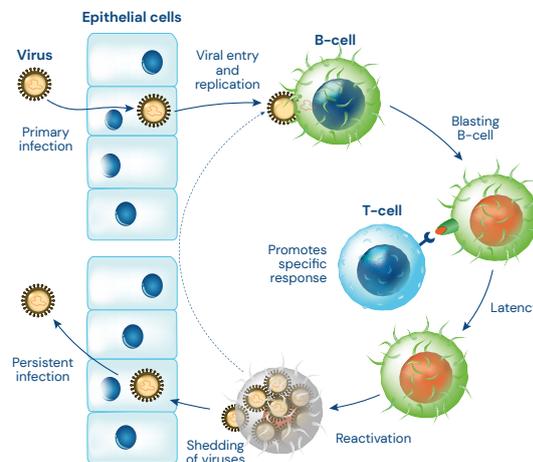
Epstein Barr virus (EBV) is a double-stranded DNA virus that infects B-Lymphocyte cells. EBV is a member of the herpes virus family. EBV is mainly spread through saliva.

Most cases of symptomatic Infectious Mononucleosis occur in older teenagers or young adults. Symptomatic treatment is often sufficient.

After the initial infection, the virus is usually latent in B-Lymphocytes: Epstein-Barr virus (EBV) infects and activates resting human B-Lymphocytes, reprograms them, induces their proliferation, and establishes a latent infection in them.

### The EBV replication cycle

EBV never truly goes away. Even if the symptoms subside, the virus will remain inactive inside your body until it is reactivated by a trigger.



Odumade OA, Hogquist KA, Balfour HH (January 2011). "Progress and problems in understanding and managing primary Epstein-Barr virus infections". *Clinical Microbiology Reviews*. 24 (1): 193–209. doi:10.1128/CMR.00044-10. PMC 3021204. PMID 21233512.

## Definition of chronic active EBV (CAEBV)

### Diagnostics:

Unusual pattern of anti-EBV antibodies  
+ appearance of Early Antigens (EA)

### Persistent symptoms:

- Fatigue & brain fog
- Lymphadenopathy
- Pharyngitis
- Enlarged liver
- Sore throat
- Flu-like symptoms
- Low-grade fever (sometimes intermittent), depression, headaches
- Prolonged time to recover



## Complementary treatment approach in Chronic Reactivating EBV includes:

- Multimessenger™
- Messenger N°1™
- Trifortify®
- Lactoferrin DR
- AO Defense

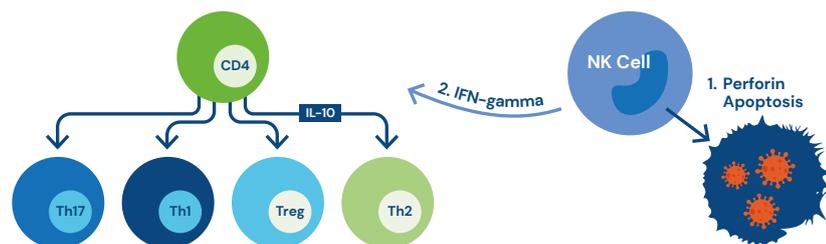


**Multi-messenger™**  
1x3 per day, just before breakfast (NK cell activity)



**Messenger N°1™**  
1x2 per day, before dinner (Specific Transfer Factors)

Powerful immune modulation to strengthen Natural Killer Cells & Transfer of cell-mediated immunity between T-Lymphocytes.





## Trifortify®

1-2 teaspoons/day  
(Oxidative stress, NK Cell Activity, Detoxification)

Supplement depleted  
Glutathione to address  
the infectious challenge



## AO Defense

2x2 per day (inhibition  
of EBV Lytic genes)



## Lactoferrin DR

3x2 per day, 1 hour before or 2 hours after meals

- prevents EBV infection of B Cells by its direct binding to the EBV receptor (CD21) on B-Cells
- interacts with TLR2 and interferes with EBV – triggered TLR2-NF-κB activation

## How should we prevent chronic reactivation of EBV?

### Address the trigger(s) that initiated the reactivation

- Stress
- Overtraining
- Lack of sleep, grief
- Hormonal changes: puberty, menopause, pregnancy & postpartum
- Pollution ( molds, heavy metals, mycotoxins, environmental pollution)

### Addres the factors that contribute to inflammation

- Blood sugar fluctuation
- Gastro-Intestinal conditions
- ...

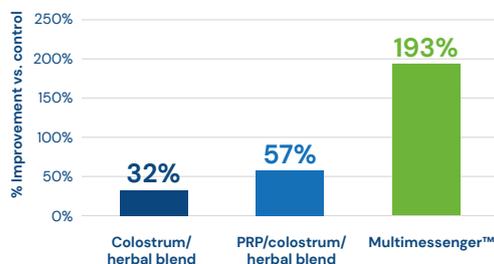
# Multimessenger™



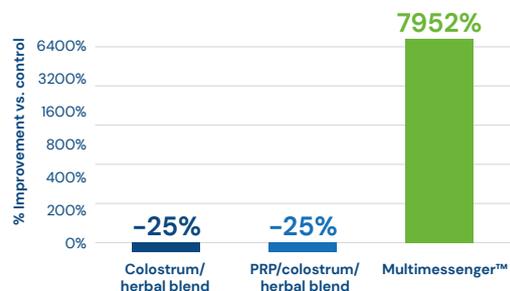
<b>indication</b>	Natural Killer Cell support Supports T reg	
<b>dosage</b>	Take 3 caps per day just before breakfast (acute: 2x3) Children aged 6 m- 2 yr: 1 capsule per day Children aged 2 yr - 6 yr: 2 capsules per day From 6 year and older: 3 capsules per day	
<b>packaging</b>	90 caps per container	
<b>daily dose (based on 3 caps)</b>	Transfer Factors – pure amino acid sequences extracted from Colostrum	500 mg
	West american Larch ( <i>Larix occidentalis</i> )	333 mg
	Inositol	200 mg
	Beta Glucan	200 mg
	Green tea ( <i>Camelia sinensis</i> )	200 mg
	Pomegranate tree ( <i>Punica granatum</i> )	200 mg
	Astragale ( <i>Astragalus membranous</i> )	70 mg
	Shiitake ( <i>Lentinula edodes</i> )	25 mg
	Dancing mushroom = Maitake ( <i>Grifola frondosa</i> )	25 mg
	Zinc (as Zinc citrate)	15 mg
	Selenium (as L-Selenomethionine)	70 µg

## Natural Killer Cell activation\*

Innate immune system activation



## Immune modulation IL-10\*\*



\* % improvement in Mean Fluorescent Intensity for CD 69 Receptor on Natural Killer Cells. (CD69 is highly correlated with NK cell activity)

\*\* % improvement in Mean Fluorescent Intensity for IL-10 on Peripheral Blood Mononuclear Cell Cultures (PBMC)

# Messenger N°1™



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**indication**

Specific Transfer Factors  
Targets specific pathogens (see comparison table)

**Immune support = Multimessenger + Specific Transfer Factors**

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**dosage**

Take 1 caps per day during the first week, then take 2 caps per day away from food

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**packaging**

60 gelcaps per container

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**daily dose  
(based on 2 caps)**

Rice flour	309 mg
Inositol hexaphosphate	126 mg
Beta Glucan (Baker's yeast)	114,8 mg
Transfer Factors – pure amino acid sequences extracted from Colostrum	21 mg

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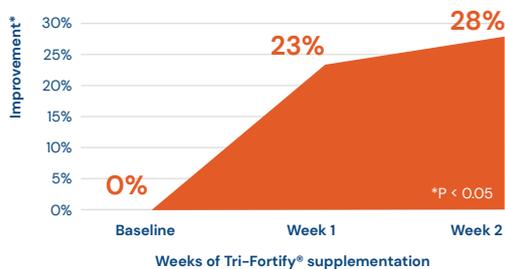
# Tri-Fortify Orange<sup>®</sup> or Watermelon<sup>®</sup>



<b>indication</b>	Detoxification with glutathione in high bioavailable formulation, powerful antioxidant on tissue level and brain level Natural Killer Cell support	
<b>dosage</b>	1 teaspoon (1 pack) per day, away from food	
<b>packaging</b>	236 ml per tube or 20 packs per box	
<b>daily dose (based on 1 teaspoon = 5 cc or 1 pack)</b>	Glutathione Liposomal Vitamin C	450 mg 50 mg

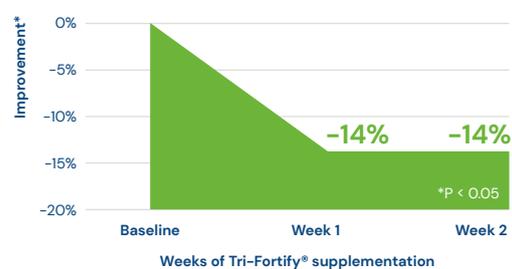
## Glutathione levels

Increase in red blood cell levels (Erythrocytes)



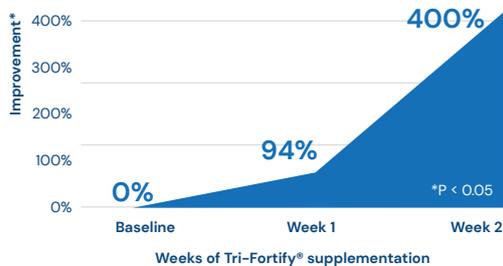
## Oxidative stress markers

Oxidized / Reduced GSH



## Immune function

Natural Killer Cell activity



## Lipid Peroxidation

(Reduced Cellular Membrane Oxidation)



Published research : Sinha, R., Sinha, I., Calcagnotto, A., Trushin, N. Oral supplementation with liposomal glutathione elevates body stores of glutathione and markers of immune function. Eur J Clin Nutr. 2018 Jan;72(1):105-111.

# Lactoferrin acid resistant



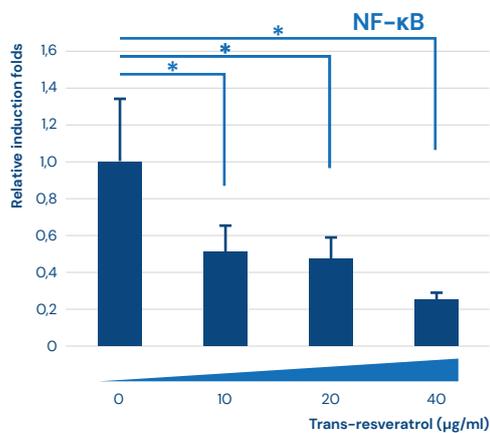
<b>indication</b>	Antiviral activity Antibacterial activity (including Helicobacter pylori) Antifungal activity (including Candida albicans) Anemia
<b>dosage</b>	Viral infections or anemia: Take 3 x 2 caps per day 1 hour before meals or 2 hours after meals Bacterial or fungal infections: Take 3 x 2 caps per day during meals
<b>packaging</b>	84 DR-capsules per container
<b>daily dose (based on 6 DR-caps)</b>	Lactoferrin 600 mg

# AO Defense



<b>indication</b>	Powerful antioxidant formulation for optimal health or as advised in different conditions: <ul style="list-style-type: none"> <li>- cardiovascular health</li> <li>- degenerative diseases</li> <li>- immune related disorders</li> <li>- viral infections</li> <li>- urease inhibition in intestinal infections like Helicobacter pylori</li> <li>- phase II detoxification</li> </ul>	
<b>dosage</b>	Take 1 caps in the morning and 1 caps in the evening	
<b>packaging</b>	60 vegecaps per container	
<b>daily dose (based on 2 vegecaps)</b>	Japanese knotweed dry extract (Polygonum cuspidatum) (Natural Trans-Resveratrol)	210 mg
	Green tea extract (Camellia sinensis)(50% EGCG)	200 mg
	Grape skin extract (Vitis vinifera)	140 mg
	Grape seed dry extract (Vitis vinifera)	100 mg

Trans-resveratrol inhibited endogenous and TNF-induced NF-κB activation in a dose-dependent manner



The effect of EGCG on F. nucleatum-mediated activation of the NF-κB signaling pathway

