### Fasy.nation Podcast Episode 155 Summary - English Translation

**Markus Kotz** is co-founder of the Apheresis Center in South Cyprus - a specialist clinic for Long Covid, Post-Vac and ME/CFS. He was affected himself, as was his mother.

Today, he and an international team run a center that focuses on a combination of different therapies - with apheresis at its heart.

In the podcast, he explains how the therapy works, who it is suitable for and why hope is justified - but not limitless.

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## **Experiences: Markus, his mum and Tanja**

Markus was one of the first Long Covid patients in Germany to be treated with the so-called combination therapy. After weeks in a wheelchair - unable to hold a glass of water at times - he was treated with H.E.L.P. apheresis by Dr Beate Jäger. He was case number 14 in her published case study.

The therapy helped him decisively on his way back. After he had previously recovered to around 40% through zinc infusions, hyperthermia and antivirals, H.E.L.P. apheresis then brought about the rest of his recovery.

Later, his mother also fell ill. She was treated in the second month after the onset of the disease - with resounding success. Today, according to Markus, she is back to "110 per cent". Her Hashimoto's disease has also largely disappeared.

H.E.L.P. apheresis was also one of the key factors for <u>Tanja from episode 126</u>.

See below for further results from the now over 1000 patients.

# Three types of apheresis are used in the clinic and this is how they work

Markus doesn't particularly like the word "blood washing" because it doesn't show the complexity of the whole thing. But for us laypeople, it helps to understand roughly what it's all about: components of the blood are separated, treated in a targeted manner and returned to the body.

There are over 40 forms of apheresis. Not all known forms of apheresis are used at the center in Cyprus. Three procedures have proven successful for the various fatigue+ diseases:

# 1. H.E.L.P. apheresis

HELP stands for heparin-induced extracorporeal lipoprotein/fibrinogen precipitation. This is a specific apheresis method that was developed for the treatment of lipometabolic disorders. It is now also used to treat other diseases, including long- or post-COVID and ME/CFS.

In H.E.L.P. apheresis, the plasma is separated from the blood, lowered to an acidic pH value and treated with heparan sulphate. Pathogens are bound and removed from the blood. The plasma is then neutralised and returned to the body - together with the cellular components.

Aim: Improvement of microcirculation, removal of protein-based inflammatory factors.

Method: Biochemical binding of harmful substances with heparan sulphate at a low pH value.

#### 2. Inuspheresis

Inuspheresis, also known as environmental apheresis, filters inflammatory factors and environmental toxins out of the blood. To do this, the plasma is rinsed several times through a special filter. This physically and chemically removes toxins, pathogens and antibodies.

Method: Mechanical-adsorptive filtration via sponge-like surfaces.

## 3. Immunoadsorption

Immunoadsorption is a form of apheresis that selectively removes certain immunoglobulins and autoantibodies from the blood plasma, while other plasma proteins are largely retained. Immune apheresis is used in particular for diseases

in which autoantibodies play a role.

Method: Selective binding of autoantibodies via specialised adsorbers.

These procedures can be used individually or in combination - depending on the symptoms and laboratory values.

Each apheresis usually takes 2 to 3 hours. It usually takes several sessions - also because harmful substances from the tissue migrate back into the blood after the first treatment ("bleed-back effect").

### Complementary therapies: Combination works better

It is important not to see apheresis as a stand-alone therapy, but always in combination with others. It is the combination that brings promising results. For example:

- 1. Apheresis
- 2. Whole Body Hyperthermia (artificial fever therapy)
- 3. Nutraceuticals (senolytic food supplement)

Depending on the case, other methods are added:

- Intravenous immunoglobulins (IVIG)
- Monoclonal antibodies (MABS)
- Peptide therapy
- Cryotherapy
- Hyperbaric oxygen therapy
- rTMS
- Psychotherapy and nutritional counselling

The therapy is customised to address the cause from different angles at the same time.

# For whom is combination therapy suitable - and for whom is it not?

**Long Covid:** According to Markus, 80-85% of Long Covid patients respond to the therapy - with significant improvements. Some patients were able to go back to work after just a few sessions. Some need longer treatment cycles.

**ME/CFS:** Here the success rate is lower. Markus says that ME/CFS is twice as difficult (or long) to treat as Long Covid - especially if the disease is long-lasting. But here too, there are amazing progressions: patients with 10-25 years of ME/CFS who make great progress with apheresis.

Some feel an improvement after the 2nd session. Others need 4 months or longer. Some do not respond at all.

Conclusion: Combination therapy does not work for everyone. But it does for many - and sometimes with surprisingly great effect.

# What must be fulfilled for the therapy to work?

### • No biomarkers = no guarantee:

In ME/CFS, there are no reliable laboratory values that predict the success of treatment. Long Covid offers slightly more approaches here (e.g. spike protein persistence, microclots, GPCR autoantibodies).

### Decide on the symptom pattern:

Depending on the symptoms (e.g. circulatory disorder, autoantibodies, myocarditis), a suitable combination is selected.

#### Do not treat too late:

The longer the disease exists, the more difficult the treatment becomes - the more sessions and costs are incurred.

# No acute fatigue on the day of treatment:

Apheresis should not be performed during a severe crash.

# Preliminary examination makes sense:

Autoantibodies, microclot tests, spike protein, cytokine profiles - ideally on site or by laboratory test from Germany.

#### Side effects and risks

The treatment is well tolerated. Typical side effects:

- Bruises at the puncture sites
- Short fluctuations in blood pressure
- Temporary exhaustion for 1-2 days
- In rare cases: Deterioration for several weeks (usually due to improper use)
- Very rare: Heparin allergy. Has not yet occurred in 1000 patients in the clinic.

The biggest risk: the high costs - and the uncertainty as to whether it will work.

#### Why Cyprus? The special features of the clinic

- Specialised facility for fatigue and chronic disorders only
- Multimodal concept with all therapies in one place

- No psychologisation the team knows and understands post-exertional malaise, MCS, POTS and other typical symptoms
- Cheaper than in Germany e.g. H.E.L.P. apheresis from approx. 1600€, Inuspheresis approx. 2500 €
- Personalised support and close monitoring
- Patient has a say no flat-rate package, but dynamic adjustment after each week

Many patients report: Just the feeling of finally being understood there is healing for them.

**Important:** Nobody can say in advance whether it will help. There is always a risk.

### Conclusion: Hope with a sense of proportion

The combination of apheresis, hyperthermia and other therapeutic approaches is not a miracle cure - but it is a glimmer of hope for many. Especially for people for whom other approaches have not helped.

Markus' credo: "I can't promise that it will work - but I can promise that we will try everything that is evidence-based and possible."

At the same time, we have to recognise that there is still too little data available. Every patient's treatment also provides additional data, which is important for research and medical development.

### Contact the clinic and free consultation

Interested parties can initially contact us without obligation or even travel to Cyprus for an interview and initial tests. Nobody is pressurised into anything.

The entire team knows how sensitive, complex and individual these diseases are.

And you can also find out more on the Apheresis Centre website.

They also offer all those affected a free 30-minute telephone consultation.

And of course, in addition to the center in Cyprus, it is also possible to have similar treatments carried out in Germany, Austria or Switzerland.

Markus also recommends Tanja from Episode 126 as a health counsellor who can support you with further questions. <u>You can find her website here.</u>