



# Staying Mobile

Biological pathways for  
regeneration of the  
musculoskeletal system

Alpstein Clinic Gais – Holistic Medicine for pain relief, mobility  
and quality of life



## Welcome to Alpstein Clinic

We are pleased that you are here today – whether as a patient, family member or someone with medical interest. At Alpstein Clinic in Gais, we combine modern biological medicine with a holistic approach to sustainably reduce pain, activate natural regeneration and preserve mobility in the long term. Our goal is to show you ways to regain quality of life through biological treatment methods – individualized, cause-oriented and scientifically grounded.



# Dr. med. Arndt Seemann

Senior physician, Alpstein Clinic Gais



“

„We cannot change the wind, but we can adjust the sails.“

”

## Training & Expertise

- Board-certified Orthopedic Surgery & Traumatology FMH
- Board-certified Surgery FMH
- Certifications in foot surgery, sonography, chiropractic/manual medicine
- Functional Medicine & Neural Therapy certifications

## Clinical Focus

- Diagnosis & treatment of chronic diseases
- Biological therapies: orthomolecular medicine, neural therapy, hyperthermia, PRP
- Diseases of the musculoskeletal system (osteoarthritis, rheumatoid arthritis, autoimmune diseases)



## The problem: Degenerative conditions are on the rise

### Osteoarthritis

Cartilage loss leads to pain and reduced mobility

### Disc herniation

Nerve compression, severe pain, functional deficits

### Tendinopathies

Chronic inflammation limiting movement

**The good news:** Tissue can regenerate—when we properly support the body's natural healing potential.





## The problem: Degenerative conditions are on the rise



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## Key factors behind degenerative diseases



- ☐ **Reduced physical activity**  
A lack of physical activity weakens muscles and joints and inhibits their regeneration.
- ☐ **Declining hormone levels**  
An age-related decline in important hormones impairs repair mechanisms and metabolism.
- ☐ **Slower metabolism**  
A slowed metabolism leads to inefficient cell regeneration and energy supply.
- ☐ **Accumulation of toxins ("tissue clogging")**  
The accumulation of metabolic waste products and toxins puts strain on connective tissue and organs.
- ☐ **Mechanical wear over the years**  
Long-term mechanical stress leads to wear and tear on joints, cartilage and intervertebral discs.
- ☐ **Nutritional deficiencies**  
An insufficient supply of essential vitamins, minerals and trace elements hinders healing and regeneration processes.
- ☐ **Altered immune function and chronic inflammation**  
A weakened or misguided immune system can promote chronic inflammation and tissue damage.

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# The Osteoarthritis Epidemic

Most common musculoskeletal complaint

Affects ~55% of adult men and ~60% of women

Leading cause of long-term disability

Responsible for 18% of all cases of severe disability.

Millions affected

Approximately 5 million chronic pain patients and 15 million intermittent pain patients annually.

Burden on the health care system

According to the German Endoprosthesis Register (EPRD), a total of 347,702 endoprosthetic procedures on hip and knee joints were documented in 2022..

**The good news:** Tissue can regenerate—when we properly support the body's natural healing potential



# Limitations Of Conventional Medicine



Conventional medicine often holds views that underestimate or even negate the body's natural healing processes. These dogmas hinder the development of effective, biological therapies:

1

Irreversible?

Cartilage and joint wear is considered inevitable and irreversible. We demonstrate that the body is capable of regeneration.

2

Cortisone as a solution?

Cortisone and NSAIDs (non-steroidal anti-inflammatory drugs) can halt joint osteoarthritis. In fact, they mask symptoms and often exacerbate the cause.

3

Only symptomatic?

Treatment is only possible symptomatically and locally. Our approach proves that cause-oriented, holistic therapy achieves lasting success.





## The Osteoarthritis Epidemic

### The good news:

**Tissue can regenerate! The body has enormous healing potential when given the right support..**



## The Biological Approach



### Cause-oriented

We look for the real causes of your complaints instead of just treating the symptoms. A precise diagnosis is the first step towards lasting healing..



### Activate self-healing

Through targeted therapies, we support the body's own repair mechanisms to regenerate tissue and restore function.



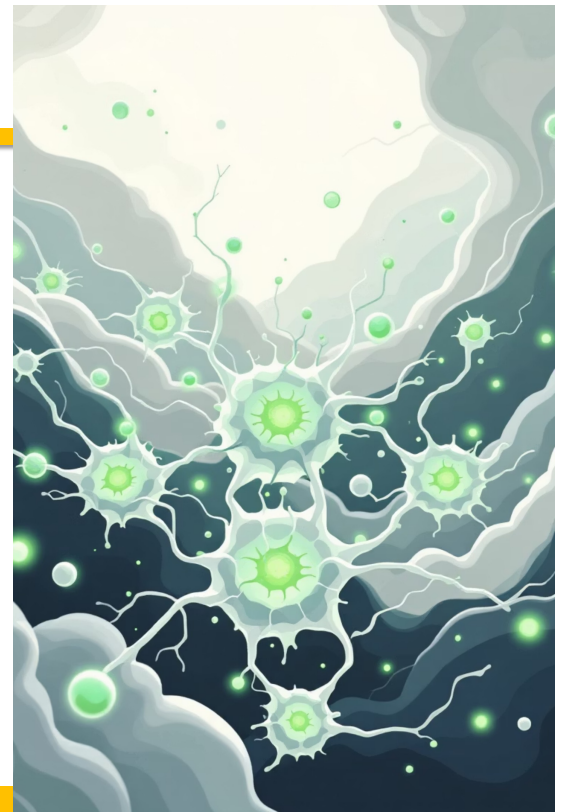
### Natural substances

We use organic active ingredients, vitamins, minerals and plant extracts to strengthen the body naturally.



### Holistic view

We view your health as an interplay between body, mind and environment. Our therapy plan is tailored to your individual needs.





## Acid-base balance

- Capillary blood gas analysis



Case study:  
metabolic acidosis

Analyt	Ergebnis	Referenzbereich
pH	7,339	7,350 - 7,450
pCO2	43,6 mmHg	35,0 - 48,0
pO2	40,1 mmHg	83,0 - 108,0
Na+	142 mmol/L	138 - 146
K+	4,5 mmol/L	3,5 - 4,5
Cl-	108 mmol/L	98 - 107
Ca++	1,23 mmol/L	1,15 - 1,33
Glu	4,1 mmol/L	4,1 - 5,5
Lac	0,42 mmol/L	0,56 - 1,39
Crea	3,78 mg/dL	0,51 - 1,19
Hct	35 %	38 - 51
cHgb	12,0 g/dL	12,0 - 17,0
cHCO3-	23,5 mmol/L	21,0 - 28,0
cTCO2	24,8 mmol/L	22,0 - 29,0
BE(ecf)	-2,3 mmol/L	-2,0 - 3,0
BE(b)	-2,4 mmol/L	-2,0 - 3,0
cSO2	71,6 %	94,0 - 98,0
AGap	11 mmol/L	7 - 16



## Mineral analysis



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Eingang	22.04.2023	Ausgang	24.04.2023	Tagesnummer	IMD Berlin MVZ Nicolaistraße 22, 12247 Berlin (Steglitz) Telefon: +49 30 77001-220, Fax: +49 30 77001-236
Patient		Geburtsdatum		0333277666	
		Versicherung	IGEL		

### Mineralstoffanalyse im Vollblut - erweitertes Profil "11 + 6" (ICP-MS)

Die Analyse erfolgte im lytierten Heparin-Vollblut zur Bestimmung der intra- und extrazellulär lokalisierten Spurenelemente.

Analyt	Ergebnis	Referenzbereich	Abweichung vom Median	HK-Korrelation
Magnesium	29,5 mg/l	30 - 40	-14 %	-15 %
Selen	66,1 µg/l	90 - 230	-38 %	-33 %
Zink	4,2 mg/l	4,5 - 7,5	-22 %	-23 %
Calcium	56 mg/l	55 - 70	-8 %	-
Kalium	1400 mg/l	1385 - 1950	-12 %	-11 %
Natrium	1659 mg/l	1500 - 1950	1 %	-
Phosphor	32,3 mg/l	403 - 577	-8 %	-
Chrom	0,31 µg/l	0,14 - 0,52	29 %	-
Kupfer	0,79 mg/l	0,70 - 1,39	-4 %	-5 %
Mangan	9,3 µg/l	8,3 - 15,0	-17 %	-
Molybdän	1,0 µg/l	0,3 - 1,3	100 %	-



# Fatty acids

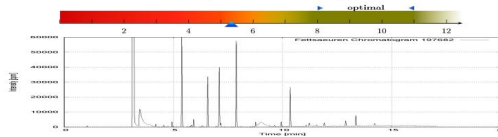
## HS-Omega-3 Index® - Befund - Referenzblatt

Omegamatrix GmbH  
Am Klopferstutz 19  
82152 Martinsried  
Germany



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info@omegamatrix.eu  
Fon: +49 (0)89 550 63 007  
Fax: +49 (0)89 550 63 008

Ihr HS-Omega-3 Index beträgt: 5.33%



Omega-3 Fettsäuren	
alpha-Linolen (ALA) 18:3 omega-3	1.23%
Eicosapentaen (EPA) 20:5 omega-3	0.85%
Docosapentaen-5 (DPA) 22:5 omega-3	1.76%
Docosahexaen (DHA) 22:6 omega-3	3.55%
Range: 3.1% - 20.8%	Summe: 7.39%

Omega-6 Fettsäuren	
Linol (LA) 18:2 omega-6	22.82%
gamma-Linolen (GLA) 18:3 omega-6	0.08%
Dihomo-gamma-Linolen (DGLA) 20:3 omega-6	1.32%
Arachidon (AA) 20:4 omega-6	9.49%
Docosatetraen (DTA) 22:4 omega-6	1.06%
Eicosadien 20:2 omega-6	0.21%
Docosapentaen-6 22:5 omega-6	0.23%
Range: 18.6% - 39.6%	Summe: 35.21%

Fettsäuren Relation	
Omega-6 : Omega-3 (1:1 - 6.7:1)*	4.8:1
Arachidon (AA) : Eicosapentaen (EPA)	11.2:1

Mono ungesättigte Fettsäuren	
Palmitolein 16:1 omega-7	0.49%
Öl 18:1 omega-7	18.15%
Gordon 20:1 omega-7	0.20%
Nervon 24:1 omega-7	0.36%
Range: 11.6% - 29.3%	Summe: 19.20%

Gesättigte Fettsäuren	
Myristin 14:0	0.46%
Palmitin 16:0	22.58%
Stearin 18:0	13.42%
Arachin 20:0	0.16%
Behen 22:0	0.44%
Lignocerin 24:0	0.40%
Range: 31.0% - 43.7%	Summe: 37.46%

Trans-Fettsäuren	
Trans Palmitolein 16:1 omega-7	0.17%
Trans Öl 18:1 omega-6	0.47%
Trans Linol 18:2 omega-6	0.13%
Range: 0.1% - 2.1%	Summe: 0.75%

HS-Trans Index	
	0.58



# Gut microbiome / Leaky gut

## Potentiell pathogene Bakterien

### Proteobacteriaceae

- \* cf. Acinetobacter spp.
- \* cf. Citrobacter spp.
- \* cf. Escherichia spp.
- \* cf. Escherichia coli
- \* cf. Enterobacter spp.
- \* cf. Hafnia spp.
- \* cf. Haemophilus spp.
- \* cf. Klebsiella spp.
- \* cf. Morganella spp.
- \* cf. Pseudomonas spp.
- \* cf. Proteus spp.
- \* cf. Providencia spp.
- \* cf. Serratia spp.

### H2S-Bildner

- \* cf. Sulfatreduzierende Bakterien (SRB)
- \* cf. Desulfovibrio piger comp. nov.
- \* cf. Bilophila wadsworthia

### Clostridien



Milieurestitution / Verdrängung potentiell pathogener Keime	
Candida	negativ
Potentiell pathogene Erreger	positiv
Bakterielle Stoffwechselgruppen / toxische Metaboliten	normal
Leaky Gut / Entzündung und Schleimhautimmunität	
Leaky Gut	ja
Entzündung	ja
Schleimhautimmunität	normal
Stabilisierung	
Dysbiose	nein
Säuerungsflora	auffällig
Butyratbildner (Gesamt + F. prausnitzii)	normal
Mucusbildung (A. muciniphila)	auffällig
Ratio Firmicutes / Bacteroidetes	normal

## Leaky Gut / Entzündung und Schleimhautimmunität

Leaky Gut	
cf. Alpha 1-Antitrypsin	346 µg/g
cf. Zonulin im Stuhl	1343 ng/g

Entzündung/Malabsorption	
cf. Calprotectin	<30.0 µg/g
cf. Histamin im Stuhl	15200 ng/g

Schleimhautimmunität	
cf. Sekretorisches Immunglobulin A (sIgA)	959 µg/g

100 - 1200  
< 100 (IgA-Mangel wahrscheinlich)  
> 1200 (chronisch entzündliche Prozesse in der Darmwand nicht ausgeschlossen)



# Food intolerances

Milchprodukte			
• Kasein (Kuh)	32.80 kU/l	<0.35	
• Lactalbumin (Kuh)	14.68 kU/l	<0.35	
• Lactoglobulin (Kuh)	>100.00 kU/l	<0.35	
• Schafmilch	13.42 kU/l	<0.35	
• Ziegenmilch	8.63 kU/l	<0.35	
Obst			
• Ananas	>100.00 kU/l	<0.35	
• Äpfel	0.58 kU/l	<0.35	
• Banane	16.66 kU/l	<0.35	
• Cranberry	6.31 kU/l	<0.35	
• Erdbeere	0.85 kU/l	<0.35	
• Kiwi	>100.00 kU/l	<0.35	
• Orange	55.34 kU/l	<0.35	
• Pfirsich	0.47 kU/l	<0.35	
• Weintraube	1.11 kU/l	<0.35	
• Zitrone	5.39 kU/l	<0.35	
Nüsse, Samen			
• Baumnuß	27.04 kU/l	<0.35	
• Cashewnuss	15.50 kU/l	<0.35	
• Ekastantia/Manone	6.42 kU/l	<0.35	
• Haselnuss	>100.00 kU/l	<0.35	
• Mandel	88.80 kU/l	<0.35	
• Paranuss	13.25 kU/l	<0.35	
• Pecanuss	4.32 kU/l	<0.35	
• Pinienkerne	30.32 kU/l	<0.35	
• Sesam	11.49 kU/l	<0.35	
• Sonnenblumenkerne	34.69 kU/l	<0.35	
Gemüse			
• Avocado	26.00 kU/l	<0.35	
• Blumenkohl	83.06 kU/l	<0.35	
• Brokkoli	62.82 kU/l	<0.35	
• Gurke	45.99 kU/l	<0.35	
• Karotte	15.29 kU/l	<0.35	
• Kartoffel	46.83 kU/l	<0.35	
• Paprika	72.48 kU/l	<0.35	
• Radieschen	59.48 kU/l	<0.35	
• Sellerie	29.94 kU/l	<0.35	
• Spargel	80.82 kU/l	<0.35	
• Spinat	7.06 kU/l	<0.35	
• Tomate	>100.00 kU/l	<0.35	
• Zucchini	72.23 kU/l	<0.35	
• Zucchini	46.28 kU/l	<0.35	
Kräuter, Gewürze			
• Knoblauch	83.01 kU/l	<0.35	
• Koriander	2.91 kU/l	<0.35	
• Kümmel	12.86 kU/l	<0.35	
• Petersilie	34.44 kU/l	<0.35	

## INTEGRATIVE MEDIZIN

### Nahrungsmittelallergien und -intoleranzen

#### Differenzierung

##### Immunologische Reaktionen IgG4

##### Getreide glutenhaltig

##### • Getreide

##### • Gluten (Glutenin)

##### • Hafer

##### • Roggen

##### • Weizen

##### Getreide glutenfrei

##### • Amaranth

##### • Buchweizen

##### • Hirse

##### • Mais

##### • Quinoa

##### • Reis

##### • Wildreis

##### Fleisch, Ei

##### • Huhn

##### • Hühnerfleisch

##### • Ovomucoid

##### Lamm

##### • Rind

##### • Schwein

##### Fische, Meeresfrüchte

##### • Forelle

##### • Gamske

##### • Hummer

##### • Kabeljau

##### • Lachs

##### • Thunfisch

Resultat Ref.Wert Vorse

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##### • Pfefferminze

##### • Schwarzer Pfeffer

##### • Senfkörner

##### • Vignette

##### • Hülsenfrüchte

##### • Erdnuss

##### • Grüne Bohne

##### • Grüne Erbse

##### • Kidneybohne

##### • Linse

##### • Sojabohne

##### Getränke

##### • Grüner Tee

##### • Kaffee

##### • Kakao

##### • Kamille

##### • Schwarzer Tee

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# Toxins diagnostics

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Eingang	07.11.2023	Ausgang	09.11.2023	Tagesnummer	IMD Berlin MVZ
Patient	Geburtsdatum			0380062208	Nicolaistraße 22, 12247 Berlin (Steglitz)
Versicherung	IGEL				Telefon: +49 30 77001-220, Fax: +49 30 77001-236

## Toxische Metalle im Urin (KMT) nach Ausleitung (ICP-MS)

Analyt	Messwert aktuell	Chelat-spezifische Toxizitätsschwellen *
Kreatinin [g/l]	0,23	( 0,40 - 2,78 )
<b>Essentielle Spurenelemente [µg/g Krea]</b>		
Bor	2604	
Chrom	8,70	< 3
Eisen	865	< 700
Kobalt	< NWG	
Kupfer	1535	< 1500
Lithium	40,4	< 145
Mangan	56,5	< 110
Molybdän	78,7	
Selen	32,2	
Vanadium	2,61	
Zink [mg/g Krea]	32,29	< 32
<b>Toxische Metalle [µg/g Krea]</b>		
Aluminium	205	< 450
Antimon	0,43	< 0,3
Arsen	25,2	< 100
Barium	5,65	
Beryllium	< NWG	
Bismut	< NWG	< 0,4
Blei	32,6	< 14
Cadmium	1,30	< 1,5
Cäsium	17,8	
Gadolinium	6,09	< 0,3
Gold	< NWG	
Nickel	< NWG	< 12
Palladium	< NWG	< 0,0001
Platin	< NWG	< 0,0001
Quecksilber	43,9	< 8
Silber	< NWG	
Strontium	709	
Thallium	0,43	
Titan	9,13	
Uran	0,87	< 5
Zinn	< NWG	
Zirkonium	6,52	

\*) Toxizitätsschwellen für Ca-EDTA + DMPS, nach dem Protokoll der Ärztesellschaft für Klinische Metallotoxikologie.



# Toxins diagnostics

## Solvents and halogenated HCs (GC-MS)

Parameter	Reference	Measurement	Unit	Comment	Compared to the reference value
1-Butanol	250.0	0	µg/l	N.D.	
1-Propanol	100.0	0	µg/l	N.D.	
2-Butanol	250.0	0	µg/l	N.D.	
2-Propanol	100.0	116.8	µg/l	High	
Acetone	10.0	5.1	mg/l	Moderate	
Benzene	200.0	7729.9	ng/l	Very high	
Dichloro ethene	500.0	0	ng/l	N.D.	
Dichloro methane	500.0	0	ng/l	N.D.	
Ethanol	100.0	0.1	mg/l	Moderate	
Ethyl benzene	500.0	0	ng/l	N.D.	
i-Butanol	250.0	0	µg/l	N.D.	
Methyl ethyl ketone	100.0	0	µg/l	N.D.	
Methyl isobutyl ketone	100.0	0	µg/l	N.D.	
Tetrachloro methane	500.0	0	ng/l	N.D.	
Toluene	300.0	1700.1	ng/l	Very high	
Trichloro ethane	500.0	0	ng/l	N.D.	
Trichloro ethene	500.0	0	ng/l	N.D.	
Trichloro methane	500.0	0	ng/l	N.D.	
Trimethyl benzene	500.0	0	ng/l	N.D.	
Xylene	300.0	1492.7	ng/l	Very high	
Acetone + Ethanol		5.2	mg/l		
Sum solvents		116.8	µg/l		
Sum halogenated HC		10922.7	ng/l		
Sum BTEX			na/l		

## Pesticides, insecticides, PCBs (GC-MS)

Parameter	Reference	Measurement	Unit	Comment	Compared to the reference value
Aldrin	50.00	0	ng/l	N.D.	
Chlorothalonil	200.0	0	ng/l	N.D.	
Chlorpyrifos	100.0	0	ng/l	N.D.	
Cyfluthrin	200.0	0	ng/l	N.D.	
Cypermethrin	200.0	0	ng/l	N.D.	
Deltamethrin	200.0	0	ng/l	N.D.	
Dichlorfluorid	100.0	0	ng/l	N.D.	
Dieldrin	20.00	0	ng/l	N.D.	
Endosulfan	20.00	0	ng/l	N.D.	
γ-Hexachlorocyclohexane	10.00	0	ng/l	N.D.	
Heptachlor epoxide	20.00	0	ng/l	N.D.	
Hexachloro benzene	10.00	277.98	ng/l	Very high	
PCB 101	20.00	0	ng/l	N.D.	
PCB 138	10.00	546.66	ng/l	Very high	
PCB 153	10.00	669.74	ng/l	Very high	
PCB 180	10.00	466.64	ng/l	Very high	
Pentachloro aniline	50.0	0	ng/l	N.D.	
Permethrin	200.0	0	ng/l	N.D.	
p-p-DDE	50.00	867.37	ng/l	Very high	
p-p-DDT	20.00	0	ng/l	N.D.	
Tolyfluorid	250.0	0	ng/l	N.D.	
α-Hexachlorocyclohexane	10.00	0	ng/l	N.D.	
β-Hexachlorocyclohexane	10.00	0	ng/l	N.D.	
Sum		2828.39	ng/l		





## Osteoarthritis and toxic metals

### Trace element analyses of hip joints in cases of femoral head necrosis show

High concentrations of heavy metals: cadmium, lead, nickel

Low concentrations of important bone structure elements: calcium, magnesium, zinc, copper, etc.

Milachowsky KA. Trace element studies in coxarthrosis and idiopathic femoral head necrosis in adults. VitaMinSpur 1987;2:79-86 and 1987;2:132-135



## Interference fields and dental metals



54-year-old patient: chronic lumbar spine pain, scalp eczema, chronic gastritis





## Core Elements of Biological Treatment



-  Dietary changes & alkaline therapy  
Targeted dietary adjustments to reduce inflammation and restore acid-base balance.
-  Orthomolekulare Therapie  
Individual supply of essential vitamins, minerals and trace elements to support cell regeneration.
-  Organ cell extract therapy  
Application of specific extracts to revitalise and strengthen damaged tissues and organs.
-  Interference field treatment  
Identification and elimination of chronic inflammation sites (e.g. in the jaw area) that can put strain on the immune system.
-  Active physiotherapy & exercise therapy  
Targeted exercise therapies and muscle building to stabilise joints and improve mobility.
-  Magnetic field therapy/heat treatments  
Use of pulsating magnetic fields to promote cell activity and relieve pain.
-  Natural remedies & hyperthermia  
Application of herbal active ingredients and heat to support healing and detoxification.



## Food as medicine

### The wisdom of Hippocrates

„Let food be your medicine and medicine be your food. “

— Hippokrates von Kos, 460–375 v.Chr.

This time-honoured insight from the father of medicine forms a cornerstone of our biological therapy approach. It emphasises the central role of conscious nutrition, not only for maintaining health, but also as an essential component in the treatment of chronic diseases such as osteoarthritis. At the Alpstein Clinic, we use the healing power of food in a targeted manner to reduce inflammation, optimise metabolism and support the body's own repair processes.



## The problem: nutrient deficiency in our food

Die Qualität unserer Lebensmittel ist durch verschiedene Umweltfaktoren und moderne Anbaumethoden stark beeinträchtigt, was zu einem weitreichenden Nährstoffmangel führt:



Unilateral overfertilisation & soil erosion

Leads to a depletion of important minerals and trace elements in the soil that are essential for plant uptake.



Unripe harvest

Fruit and vegetables are often harvested too early, which means they do not have enough time to develop their full vitamin content and ripeness.



Acid rain & mineral leaching

Damages plants and depletes soils, leading to a loss of essential minerals that should enter our food chain.



Long transport routes

The freshness of food suffers from long transport routes, and vitamins and other sensitive nutrients are also lost.



Long-term storage

Both manufacturers and households lose significant biological value and nutrients when food is stored for long periods.



Harmful packaging materials

Certain types of packaging can release chemicals into food and also contribute to environmental pollution.



## Nutrient loss due to food technology

Modern food processing methods, which aim to increase shelf life and improve appearance, often result in a significant loss of essential nutrients:



Refining & Bleaching

Processes such as refining and bleaching remove not only unwanted components, but also layers rich in vital nutrients from grains and other foods.



Change in fats

Emulsification and the saturation of unsaturated fatty acids can impair the natural structure and health benefits of valuable fats.



Irradiation & preservation

Physical preservation methods, including irradiation, can reduce the stability of heat- and light-sensitive vitamins and enzymes.



Chemical additives

The use of colourings, flavourings, stabilisers and processing aids puts strain on the body and can inhibit the bioavailability of nutrients.





# Fundamental dietary errors



## Too much

Excessive consumption, which overloads the digestive tract and leads to an accumulation of metabolic waste products.



## Too fast, too unfocused

Eating in a hurry or while distracted prevents adequate pre-digestion and satiety, which negatively affects digestion.



## Far too confused

Combining incompatible foods can make digestion difficult and impair nutrient absorption.



## Too late

Eating late, especially heavy meals, puts strain on the body and disrupts the sleep-wake cycle.



## Too tired (physically and mentally)

Eating when exhausted can reduce digestive efficiency and put additional stress on the body.



## The 'white poisons'

Excessive consumption of refined sugar, white flour and table salt can promote inflammation and disrupt the acid-base balance.

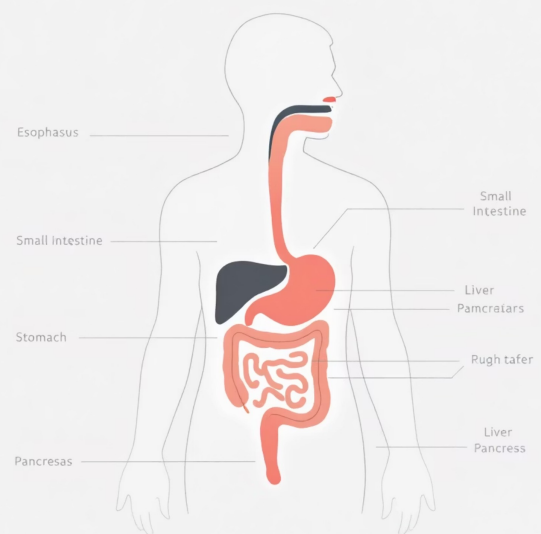


## Recreational drugs

Alcohol, nicotine and excessive caffeine consumption put strain on the metabolism and deprive the body of valuable nutrients.



# Digestion: the root of our health





## Healthy eating principles



### Intestinal rest

Light, easily digestible food to relieve and regenerate the digestive tract.



### Thorough chewing

Each bite must be chewed thoroughly until it is liquid, for optimal pre-digestion.



### Mindful eating

Slow, mindful eating without distractions for optimal digestion and satiety.



### Alkaline diet

Focus on alkaline foods to restore acid-base balance and reduce inflammation.



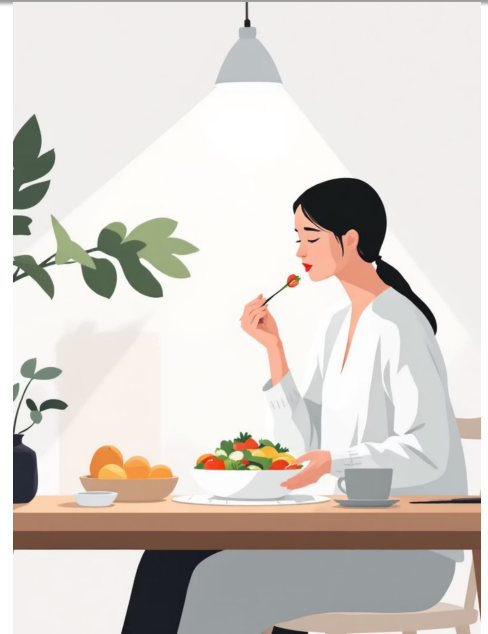
### Cleaning

Detoxification and cleansing of the body through special procedures and colon cleansing.



### Supplementation

Targeted supplementation with micronutrients to support regeneration and remedy nutrient deficiencies.



## Orthomolecular therapy: Essential micronutrients

### Vitamin C (500-2000 mg)

Strengthens the immune system and is essential for collagen synthesis, an important component of cartilage, bones and connective tissue. Infusions of 7.5-15 g can be used optionally.

### Glucosamine (400-600 mg)

A natural component of cartilage tissue that helps maintain cartilage structure and function and can help with joint pain.

### Magnesium (250-500 mg)

Essential for over 300 enzymatic processes, important for muscle function, bone health and energy production, and can relieve muscle cramps.

### Manganese

An important trace element that is involved in the formation of bone and cartilage and activates antioxidant enzymes.

### Collagen (5-10 g per day)

As the main component of cartilage, tendons and ligaments, collagen is essential for the structure and elasticity of the musculoskeletal system. Supplementing with hydrolysed collagen can support cartilage regeneration and reduce joint pain.

### Vitamin E (400-1000 IE)

A potent antioxidant that protects cells from oxidative stress and has anti-inflammatory properties, which is beneficial for joint diseases.

### Chondroitin (400-600 mg)

Promotes water retention in cartilage and supports its elasticity and resilience, often used in combination with glucosamine.

### Zinc (10-25 mg)

Plays a central role in the immune system, cell division and wound healing, as well as in maintaining bone structure.

### Unsaturated fatty acids

Omega-3 fatty acids in particular have powerful anti-inflammatory properties and are crucial for cell membranes and joint health.

### MSM Methylsulfonylmethan 2-8g/day

Organic sulfur, which can reduce inflammation, relieve pain, and improve cartilage, collagen, and connective tissue structure



## Other plant-based micronutrients

Plant extracts provide support for degenerative diseases:

### Incense extract

- Boswellic acids
- Strong anti-inflammatory & pain relieving
- Reduces swelling, improves joint function (especially in cases of osteoarthritis)

### Nettle extract

- Anti-inflammatory & pain-relieving
- Effective due to fatty acids (e.g. 13-hydroxy-octadecadienoic acid)
- Promotes the elimination of metabolic waste products

### Bromelain

- Enzyme complex from pineapple
- Proteolytic characteristics
- Reduces swelling, anti-inflammatory
- Promotes tissue healing
- In preparations such as Phlogenzym®, Wobenzym®

### Curcuma (turmeric extract)

- Curcumin: powerful natural anti-inflammatory agent
- Antioxidant
- Reduces joint pain and stiffness
- Bioavailability improved with piperine (black pepper)



## Oral treatment with collagen

### What is collagen??

Collagen is the most abundant protein in the human body and the main component of connective tissue. It gives our structures strength and elasticity:

- Tendons, ligaments, fasciae
- Joint capsules & cartilage
- Bone
- blood vessels
- Skin

Over 90% of the body's collagen is type I, with a smaller proportion of type II found specifically in cartilage. With age, the body's collagen production decreases, which can lead to a loss of elasticity, strength and resilience.



## Oral treatment with collagen

Why is collagen important in degenerative diseases?



### Cartilage metabolism

Supports the healthy development and maintenance of joint cartilage.



### Tendon & ligament strength

Promotes the resilience and stability of these important structures.



### Connective tissue structure

Improves the overall elasticity and strength of connective tissue.



### Stabilising effect

Provides support for osteoarthritis, tendinopathies and fascial problems.



## Moderate hyperthermia: Biological effects



### Mikroangioperfusion

Improved blood circulation in the finest blood vessels, which optimises the transport of nutrients and oxygen to the cells.



### Lymph flow

Stimulation of the lymphatic system for more efficient detoxification and purification of the tissue.



### Oxygen utilisation

Increased uptake and utilisation of oxygen in the cells, which boosts energy production.



### Metabolism

More active cell metabolism, which accelerates repair processes and optimises cell function.



### Immune system activity

Strengthening the immune system, which helps the body fight inflammation and promote healing processes.



### Change in aggregations

Positive influence on the cellular microenvironment (ground substance) by reducing undesirable aggregations.

These synergistic effects help to reduce inflammatory processes, promote tissue regeneration and improve overall cell health, which is crucial for the treatment of degenerative diseases.





## Neural therapy – regulation of the nervous system

Neural therapy is a proven method for regulating the autonomic nervous system. Targeted injections into skin points, scars, interference fields or nerve nodes can harmonise disturbed regulatory circuits.



### Regulation

Harmonisation of the autonomic nervous system and restoration of natural regulatory circuits



### Pain inhibition

Natural pain relief through modulation of inflammatory processes



### Circulation

Improvement of local blood circulation for optimal nutrient supply



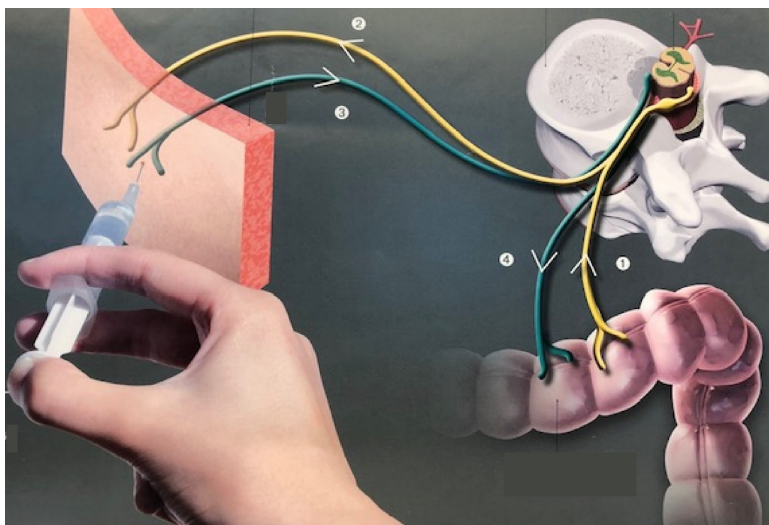
### Healing Impulses

Activation of the body's own self-healing powers in chronic conditions

Neural therapy is particularly effective in cases of chronic pain where conventional therapies reach their limits.



## Neural therapy – regulation of the nervous system





# Neural therapy: scar infiltration

## Scars as interference fields & scar infiltration

- Scars – even old or inconspicuous ones – can form energetic interference fields.
- They impair the body's self-regulation.
- They block energy flow and nervous control.
- They can trigger chronic complaints in distant parts of the body.
- The cause is often not local, but due to the remote effect of the scar.

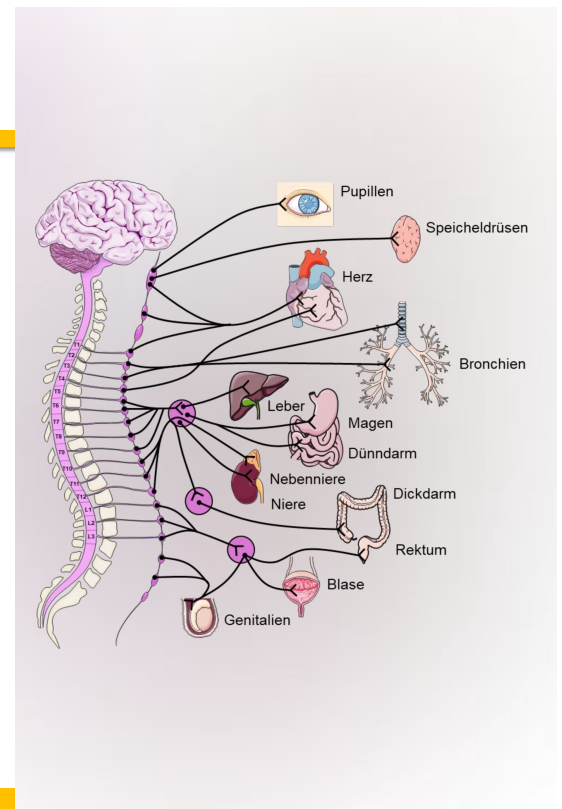
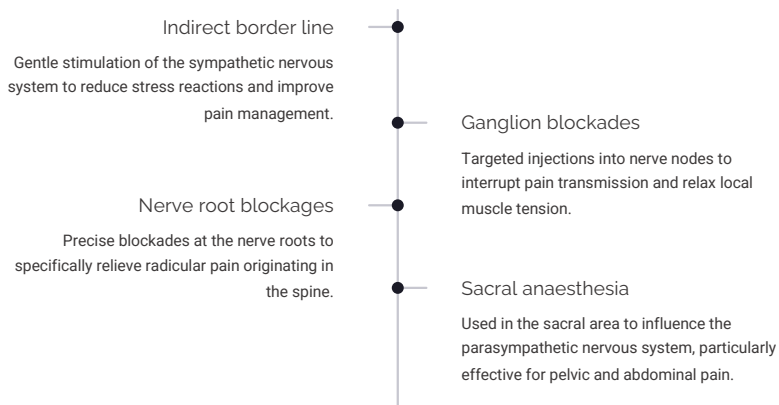
## Narbeninfiltration mit Procain

- Injection of procaine into and around the scar
- Releases vegetative and fascial blockages
- Reactivates the autonomic nervous system
- Improves local blood circulation and cell regulation
- Supports natural healing processes
- Can provide lasting relief from long-standing complaints



# Neural therapy: pain and stimulus threshold regulation

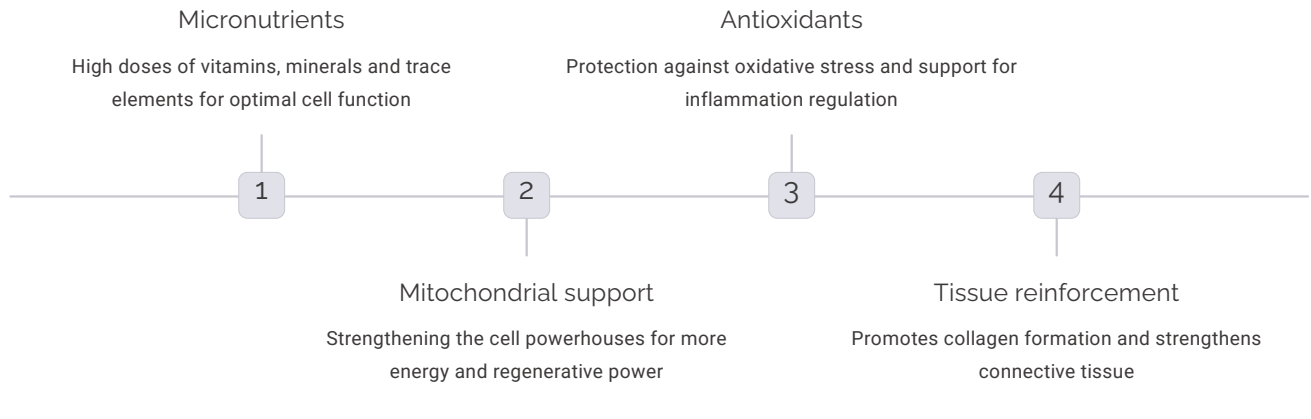
- Specific approaches to directly influence the autonomic nervous system
- Regulation of pain and stimulus thresholds
- Targeted interventions alleviate chronic pain conditions
- Activation of the body's self-healing powers





## Infusion therapies – healing from inside

Infusion therapies enable the targeted delivery of high doses of vital substances. In this way, we support cellular energy, reduce oxidative stress and promote healing processes at the cellular level.



## Procaine base infusion

Synergistic effects: comprehensive support for cell regeneration and inflammation regulation.



### Neurovegetative regulation

Calms pain/stress axes, relieves the nervous system.



### Improving the environment

Bases: optimal, regenerative tissue environment, promotes healing.



### Improvement of microcirculation

Stress reduction, pH stabilisation, improved blood circulation.



### Pain relief & anti-inflammatory

Regulates neurogenic inflammation, relieves pain.



### Tissue regeneration

Promotes the development of cartilage, fascia, tendons and intervertebral discs.



## Procaine base infusion

- Osteoarthritis of all joints
- Degenerative spinal changes
- Disc degeneration
- Tendinopathies / Bursitis / Frozen Shoulder
- Muscular imbalances caused by hyperacidity
- Fibromyalgia-like symptoms

The mechanisms of action of procaine base infusion are specifically tailored to degenerative processes:

Chronic pain conduction	Vegetative relief, interruption of pathological pain loops
Overacidified, hardened tissue	Alkaline buffering, improved protein and cartilage regeneration
Inflammatory irritation	Neurogenic anti-inflammation
Reduced ability to regenerate	Optimisation of the cellular environment & mitochondrial function
Joint and fascia tension	Muscle relaxation, improved blood circulation

## Biological pain therapy with ozone

Ozone infusion:  $O_2-O_3$  mixture, regulates metabolism and microcirculation. Activates natural repair mechanisms.

### Inflammation modulation

Regulates inflammation. Reduces pro-inflammatory cytokines. Activates anti-inflammatory signalling pathways. Important for degenerative diseases and low-grade inflammation.

### Mitochondrial activation

Improves cellular energy and ATP production. Activates the mitochondrial respiratory chain. Important for degenerative tissue (cartilage, intervertebral discs, tendons) suffering from energy deficiency.

### Improvement of microcirculation

Increases  $O_2$  release in tissue. Improves erythrocyte flow properties. Promotes NO release (vasodilation). Better capillary blood flow in osteoarthritis and degenerative spinal changes.

### Antioxidant protection systems

Controlled 'eustress'. Activates the body's own protective systems (glutathione, SOD, catalase). Optimises oxidative stress in chronically degenerated tissue.

### Pain system modulation

Reduces neurogenic inflammation. Improves oxygen supply to painful areas. Reduces oxidative irritation of nerve tissue. Promotes collagen synthesis and matrix regeneration (cartilage/intervertebral disc).



## The importance of ozone therapy in degenerative diseases

1 Cartilage wear  
Improving cellular energy and redox regulation promotes cartilage integrity.

2 Disc degeneration  
Reduces inflammation and improves microcirculation for intervertebral disc regeneration.

3 Chronic tendon irritation  
Promotes healing by reducing oxidative processes in tendon tissue.

4 Joint inflammation  
Modulates inflammatory processes without completely blocking them and supports joint function.

5 Myofascial pain  
Provides vegetative and vascular relief for muscles and fascia.

6 Systemic hyperacidity, toxin load  
Optimises the body's antioxidant capacity and supports detoxification.

## Regenerative injection therapies

- Core element of biological therapies
- Activate the body's own healing powers
- Repair and strengthen damaged tissue (cartilage, tendons, ligaments)

### Activation of healing

Stimulation of the body's own repair mechanisms for tissue regeneration.

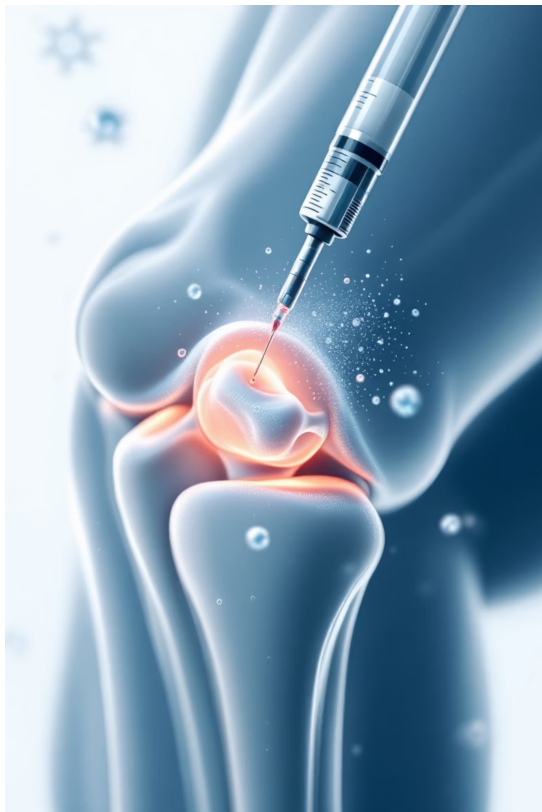
### Sustainable relief

Chronic pain relief, improved joint mobility.



### Minimally invasive

Gentle surgical alternative, short recovery time.





## Regenerative injection therapies

Our biological therapy combines various advanced approaches to promote the regeneration of damaged tissue and provide lasting pain relief. We distinguish between intra-articular (into the joint), periarticular (around the joint) and peritendinous (around tendon structures) local applications.

### Intra-articular injections

Directly into the joint to maximise regeneration

### Periarticular injections

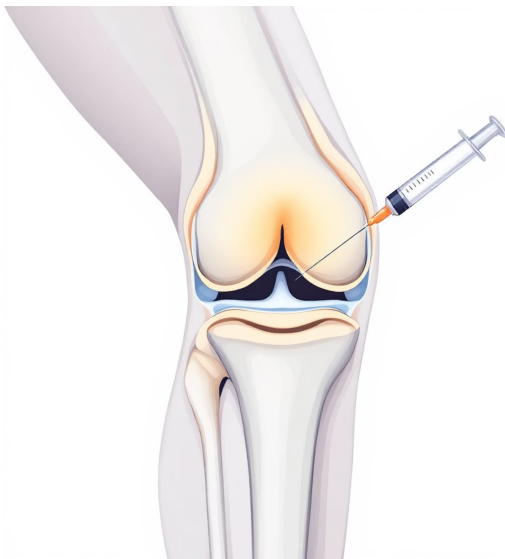
Around the joint, for treating the joint capsule and supporting the surrounding tissue

### Peritendinous injections

Near tendons, for the treatment of tendon degeneration and injuries



## Regenerative injection therapies



### PRP therapy (platelet-rich plasma)

Growth factors extracted from your own blood stimulate natural healing processes. Ideal for osteoarthritis, tendon injuries and sports injuries.

### Hyaluronic acid

Structural development in connective tissue through targeted supply of collagen – the most important building material for tendons, cartilage and joint capsules.

### Regeneration instead of replacement

Our goal is to restore the natural tissue structure and function – not to replace it artificially with prostheses.





## PRP – Platelet Rich Plasma (autologous blood therapy)



PRP is a concentrated component of your own blood that is rich in growth factors, cytokines and regenerative signalling molecules. These substances produced naturally by the body specifically stimulate healing and regeneration.

### Components

- Growth factors
- Cytokines
- Regenerative signal molecules

### Stimulates

- Tissue regeneration
- Cartilage metabolism
- Healing tendons and ligaments
- Local blood circulation

☐ **Important:** PRP contains no foreign substances and acts purely biologically – ideal for patients who want a cause-oriented and natural treatment.



## Mechanism of effect (biological-integrative)

PRP exerts its effect across several biological levels, which contribute synergistically to healing and regeneration:

### Regeneration through growth factors

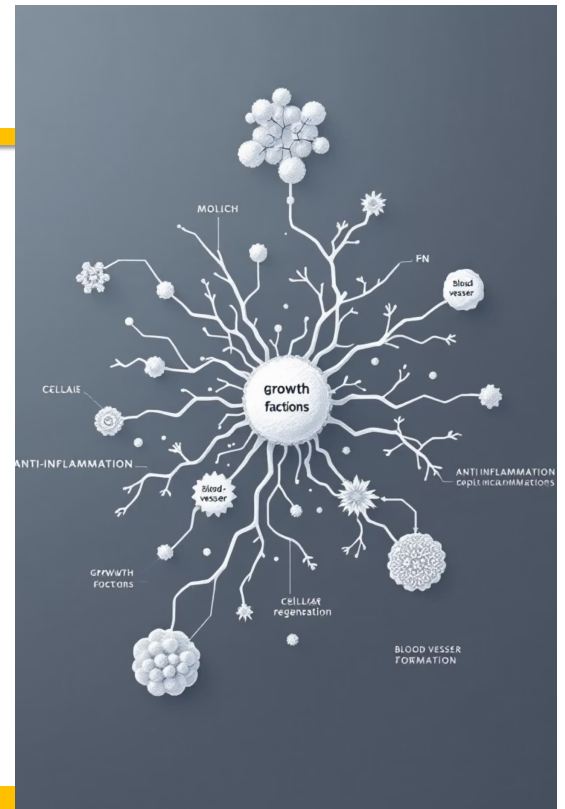
- Activation of fibroblasts & stem cells
- Promotion of collagen and matrix formation
- Increase in tissue elasticity
- Supporting cartilage and tendon healing

### Inflammation modulation

- Reduction of chronic low-grade inflammation
- Reduction of degenerative degradation processes
- Promotion of a healing environment

### Improvement of blood circulation

- Angiogenesis ("formation of new microvessels")
- Increased oxygen supply to damaged tissue





## PRP therapy procedure



### Blood sampling

10–20 ml of your own blood is taken from a vein.



### Preparation

The drawn blood is processed in a special centrifuge system to separate the valuable platelets and growth factors from the rest of the blood.



### PRP collection

The concentrated PRP (platelet-rich plasma) is isolated. This concentrate is rich in biological agents that stimulate healing.



### Targeted injection

The PRP obtained is injected precisely into the affected joint, tendon or fascia.



## Why PRP instead of cortisone?

1

### Healing vs. symptom suppression

PRP: Promotes healing and regeneration

Cortisone: Only alleviates symptoms

Stimulates the body's own repair processes, improves cell growth and tissue formation.

Suppresses inflammation in the short term,

2

### Protection vs. weakening

PRP: Protects & Strengthens

Cortisone: May cause weakness

Strengthens tendons, ligaments and cartilage, improving their structure and elasticity.

Can damage tendons and accelerate cartilage degradation, especially with repeated use.

3

### No side effects

PRP: 100% autologous

Cortisone: Potential side effects

Obtained from the patient's own blood, well tolerated, no systemic side effects

May lead to increased blood pressure, systemic stress and local tissue damage.

4

### Perfect for degeneration

PRP: Improves biological environment

Cortisone: Limited effect

Optimises healing conditions, reduces chronic inflammation, improves metabolism

Does not offer a long-term solution for the causes of degenerative diseases.

5

### Long-term benefits

PRP: Long-lasting effects

Cortisone: Short-term relief

Sustainable functional improvement and lower relapse rate

The effect is often temporary and does not address the underlying cause.



## Hyaluronic acid: the natural joint lubricant

Hyaluronic acid (HA) is a molecule produced naturally in the body that plays a central role in the musculoskeletal system. It is crucial for the smooth functioning of joints and tendons.

### Joint lubrication

HA ensures optimal lubrication and cushioning in the joints, similar to a shock absorber.

### Cartilage preservation

It maintains the elasticity of cartilage and is essential for its nutrient supply.

### Tendon gliding ability

HA enables the smooth gliding of tendons and tendon sheaths.

In degenerative diseases such as osteoarthritis or tendon irritation, the body's own hyaluronic acid is often reduced or altered in quality. Therapeutic injections replace and improve this natural function.



## How Hyaluronic Acid Works



### Improvement of joint and tendon mobility

- Replaces missing joint/lubricating fluid
- Reduces friction between cartilage surfaces and in the tendon sheath

### Shock-absorbing & protective effect

- Increases viscoelasticity
- Absorbs mechanical stress
- Protects cartilage and tendon structures

### Promotion of cartilage and connective tissue activity

- Activates chondrocytes (cartilage cells)
- Improves the extracellular matrix
- Promotes hydration of tendon and fascia tissue

### Inflammation modulation

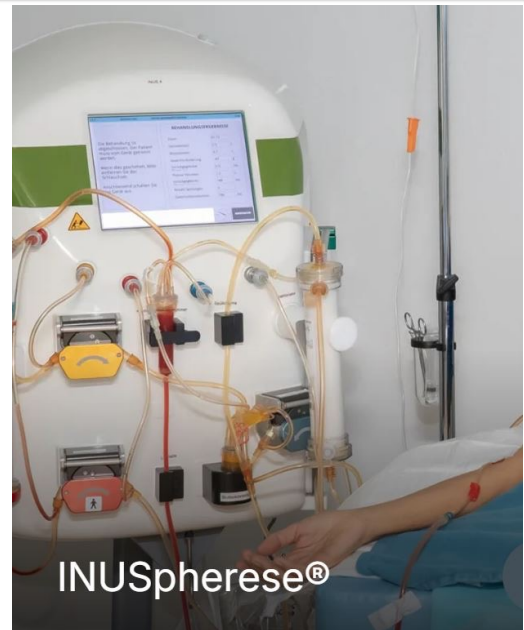
- Reduces local inflammatory mediators
- Relieves tendon attachment irritation (e.g. patellar tendon, Achilles tendon)
- Stabilises the local environment



# Detoxification

## Inuspherese

- State-of-the-art extracorporeal blood purification procedure
- The patient is connected to the device shown here via two venous accesses.
- In a treatment lasting approximately two hours, approximately 1.5 times the amount of blood is filtered painlessly.



## INUSpheresis®



### Removal of disruptive factors

Targeted elimination of inflammatory mediators, immune complexes, toxins and heavy metals that promote degenerative processes.



### Reduction of inflammation

Reduction of chronic systemic inflammation, which is a major cause of pain and tissue damage in degenerative diseases.



### Optimisation of cell regeneration

Creation of a purified internal environment that improves the function of cells, tissues and organs and maximises the effect of other biological therapies.





## Psychoenergetic harmonisation

In addition to the physical and biochemical aspects of health, psychoenergetic harmony also plays a decisive role in our well-being and the activation of self-healing powers. We offer a wide range of methods that bring body, mind and soul into harmony:

### Talk & affirmation therapy

Methods for strengthening inner attitude and dissolving emotional blockages.

### Body therapies (e.g. Feldenkrais, Eutony)

Promotion of body awareness and improvement of movement patterns to reduce tension.

### Energy exercises (e.g. qigong, yoga)

Practices for directing life energy and promoting relaxation and vitality.

### Relaxation & suggestive techniques

Techniques such as autogenic training and meditation for deep mental and physical relaxation.

### Complementary methods (e.g. homeopathy, Bach flower remedies)

Holistic approaches to supporting the body's energy balance.

These therapies can be tailored to your individual needs in order to strengthen your resilience and promote harmonious balance on all levels.



## Key Messages – Your Path to Regeneration

1

Degenerative diseases are not destiny.

They develop as a result of chronic stress, inflammation, nutrient deficiencies, environmental toxins, and lack of movement.

2

The body can regenerate.

Cartilage, tendons, fascia, and intervertebral discs have a far greater capacity for repair than previously believed – as long as we create the right conditions.

3

The root cause matters.

That's why we analyze metabolism, micronutrients, inflammatory status, toxins, gut health, and possible interference fields to understand what is truly driving your symptoms.

4

Biological medicine activates self-healing.

With nutrition, micronutrients, collagen, gut therapy, hyperthermia, neural therapy, procaine-base infusions, ozone therapy, PRP, hyaluronic acid, and INUSpheres®, we improve: inflammation → metabolism → tissue regeneration.

5

Sustainable improvement is possible.

When we treat the causes instead of suppressing symptoms, the body can regain mobility, reduce pain, and stabilize itself in the long term.