



CHRONIC STRESS

“Stress” is defined as a natural response of the human body that evolved in response to dangerous situations. In situations of acute danger, the release of stress hormones and neurotransmitters can temporarily enhance physical performance, enabling the body to get into a type of “fight or flight” mode. Nowadays, such scenarios are rather rare. Modern stress arises from different causes, such as an imbalance between demands and compensatory abilities involving strategies like positive thinking, self-affirmation, relaxation, or other coping strategies. When such an imbalance occurs, individuals experience a sense of pressure which is perceived as stress. According to surveys, 80% of adults in Germany suffer from stress.

MAIN SYMPTOMS

- headache
- gastrointestinal complaints
- cardiovascular diseases
- anxiety, restlessness
- sleep disorders, fatigue
- lack of concentration, low performance
- dissatisfaction
- susceptibility to infections
- depressive mood

CAUSES AND PATHOGENESIS

- **work life**
 - long working hours
 - time pressure
 - external control
 - constant availability
 - overwork
- **school/university**
 - exam stress
 - fear of failure
 - feeling overwhelmed
- **personal life**
 - conflicts
 - separations
 - losses
 - excessive demand
- **too high expectation of oneself**

THERAPY

- **regulate tryptophan and catecholamine metabolism (depending on the report)**
 - amino acids (Trp, Phe, Tyr)
 - melatonin
 - griffonia, curcumin, quercetin, indole-3-carbinol, passionflower
- **compensating for nutrient deficiencies**
 - cofactors like vitamin B1, B3, B6, B9, B12, D
 - cofactors like magnesium, selenium, zinc, copper, ...
- **methyl group donors, especially SAM**
- **eliminate inflammations and ROS**
 - omega-3 fatty acids, vitamin C, E
- **treat mitochondrial dysfunction and RNS**
 - coenzyme Q10, NADH, vitamin B12, L-carnitine, ...
- **additional phytotherapeutics such as ashwagandha or balm**
- **other general approaches:**
 - balanced diet with plenty of fish, fruit, and vegetables
 - reduce or avoid alcohol, nicotine, caffeine, and simple sugars
 - sleep hygiene
 - regular physical activity
 - relaxation techniques
 - reduce number of appointments
 - avoid time pressure
 - digital detox

DIAGNOSTICS

HAVE THE
FOLLOWING
EXAMINED

SF610A STRESS BASIC PROFILE

Material: T928

Catecholamine metabolism

- dopamine, noradrenalin, adrenalin + precursors (Phe, Tyr)

Tryptophan metabolism

- Trp, serotonin
- important metabolites and enzymes

Relevant cofactors

- vitamin B3, B6 (cystathionine), B12 (MMA)
- BH4 (tetrahydrobiopterin)

Methylation capacity

- methyl group donors (SAM, betaine, choline)
- methylation activity (SAM/SAH)

Mitochondrial dysfunction (screen)

- lactate, pyruvate + ratio
- citrate, suberate
- NO formation
- fatty acid metabolization (L-carnitine)

Immune activation

- neopterin

Intestinal factors influencing inflammation

- TMA, TMAO
- bacterial uremic metabolites

SF610B STRESS MIDI PROFILE

Material: T928, TBio1

In addition to the Basic Profile:

Other neurotransmitters

- GABA, glutamate

Hypothalamic-pituitary-adrenal gland axis

- cortisol diurnal profile

SF610C STRESS COMPLETE PROFILE

Material: T923, T928, TBio1, 2EDTA, Hep, S

In addition to the Midi Profile:

Other tryptophan metabolites

- melatonin

Other cofactors

- vitamin B9, D3, Q10
- magnesium, copper

Antioxidant minerals

- zinc, selenium

Vascular protective factors

- fatty acid status (omega-3/omega-6 fatty acids)

ADDITIONS

In s/o food intolerances:

- C044 PreScreen B
- B180 wheat germ agglutination

DIFFERENTIAL DIAGNOSTICS

■ fatigue

- iron deficiency → G612 small blood count, Fe (s), transferrin, transferrin saturation
- anaemia → D160 complete blood count
- hypothyroidism → F200 TSH, fT3, fT4

■ irritable bowel symptoms

- see irritable bowel profiles SA710A, SA710B, SA710C