

TCIM Intervention of Autism Spectrum Disorders

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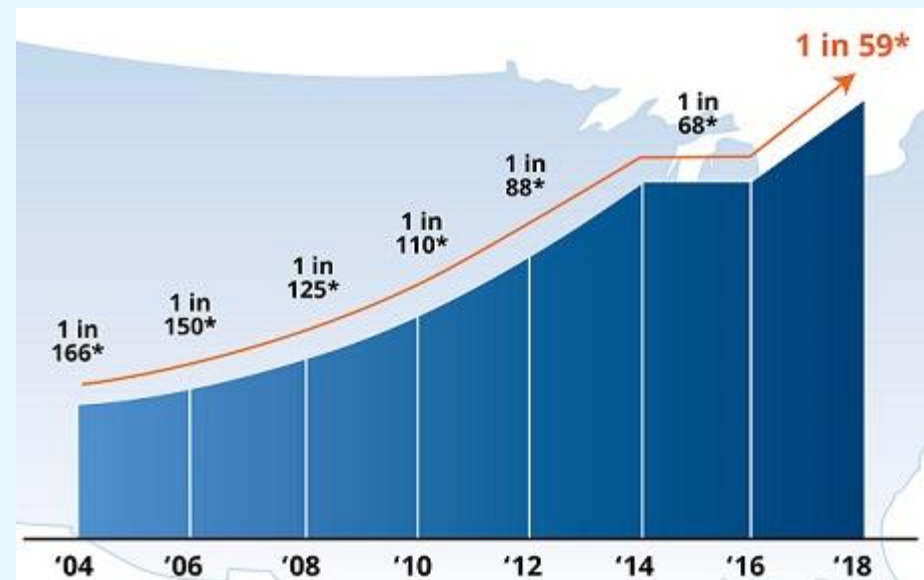


Autism spectrum disorders (ASD) cover a range of heterogeneous neurodevelopmental conditions, characterized by persistent deficits in social and communication interactions presenting with repetitive, stereotypic interests, and behaviors.

ASD begins early in childhood and tends to persist into adolescence and adulthood.

Investigation of ASD risks: M-CHAT/R in Czech Republic in 18 months (<https://www.m-chat.org/mchat.php>).

ASD is the fastest-growing developmental disability in the last two decades in all countries over the world.



Země	Výskyt/ 10 000	1:X	Země	Výskyt/ 10 000	1:X
USA	250	1:40	Evropská Unie	120	1:83
Kanada	152	1:66	Velká Británie	100	1:100
Nový Zéland	152	1:66	Irsko	150	1:66
Austrálie	144	1:69	Česká republika	14	1:715
Čína	429	1:23	Německo	38	1:263
Japonsko	322	1:31	Polsko	3	1:333
Jižní Korea	220	1:45	Portugalsko	9	1:111

Therapy of ASD

Despite the intensive research the effective therapy for ASD core symptoms supported by EBM have not yet been proved.

Pictures of investigated childrens are used with agreement of parents.



CASE REPORT

MARTIN K. * 03. 2006

Martin was born healthy and bright, breast-fed for 8 months. He talked, walked, and played normally. Between 18 months and 2,5 years he started to select food ending with milk and rolls. He refused vegetable, fruits, and meal. His stool was sticky and smelling, his belly was blouted. His language became less interactive and he did not use about 50 % of words, which he used before. He was diagnosed with ASD at the age 2,5 years.

Parents organized the investigation of holistic doctor and tests of food sensitivity. Elevated IgG anti-gliadin antibodies indicated an autoimmune response to gluten and to 28 foods, such as dairy, eggs, yeast, and soy, indicating disrupted intestinal permeability.



Parents started to introduced slowly diet without gluten and casein (GFCF) with some supplements. GFCF diet improved stool. Most important supplements were:

Antioxidants, vitamins B6 + B9 + B12, magnesium, zinc, vitamin D3.

There was very important improvement in language. Martin also started to smile. He was able to enter the first class of school without any limitations.



The parent's cooperation is the most important for effective therapy.

Test ATEC <https://www.autism.org/autism-treatment-evaluation-checklist/>

	Scale I Speech Range: 0 – 28	Scale II. Sociability Range: 0 – 40	Scale III Sensory /Cognition Range: 0 – 36	Scale IV Health /Physical/ Range: 0 – 75	Total Range: 0 – 180
Centile					
<i>Mild</i> (<i>mírný</i>)					
0 – 9	0 – 2	[0 – 4]	[0 – 5]	0 – 8	0 – 30
10 – 19	3 – 5	5 – 7	6 – 8	9 – 12	[31 – 41]
20 – 29	6 – 7	8 – 10	9 – 11	13 – 15	42 – 50
30 – 39	[8 – 10]	11	12 – 13	[16 – 18]	51 – 57
40 – 49	11 – 12	12 – 13	14 – 15	19 – 21	58 – 64
50 – 59	13 – 15	14 – 15	16 – 17	22 – 24	65 – 71
60 – 69	16 – 19	16 – 18	18 – 19	25 – 28	72 – 79
70 – 79	[20 – 21]	19 – 21	20 – 21	29 – 32	80 – 89
80 – 89	22 – 24	22 – 25	22 – 25	33 – 39	90 – 103
90 – 99	25 – 28	(26 – 40)	(26 – 36)	(40 – 75)	(104 – 179)
<i>Severe</i> (<i>Vážný</i>)					

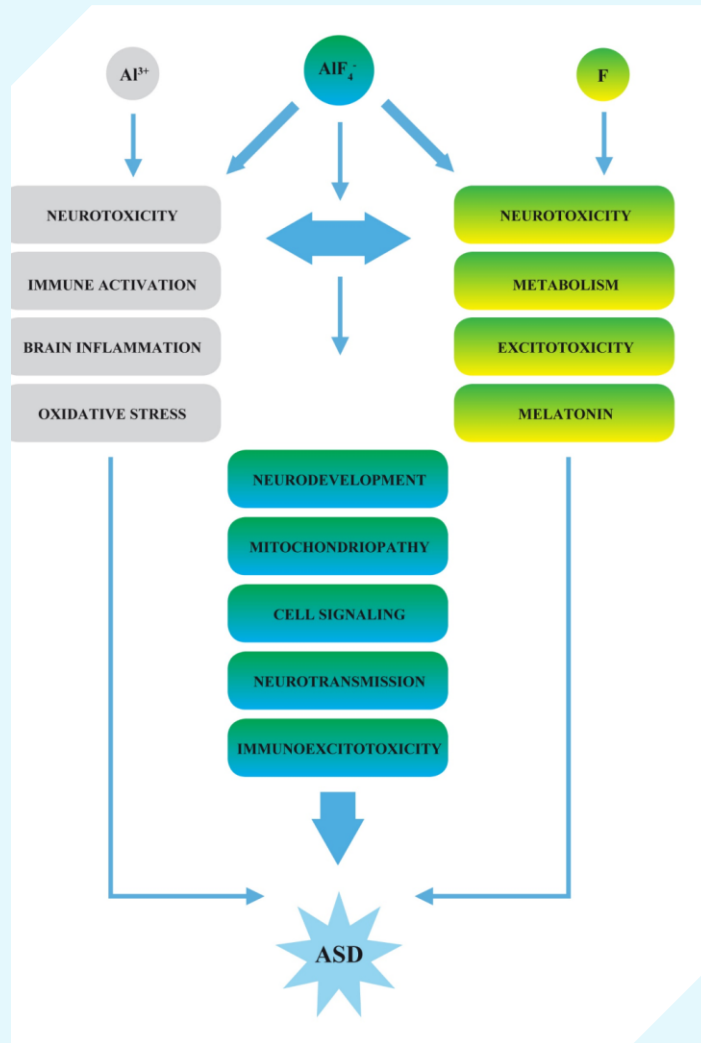
02/17/2009

11/17/2011



Improvement of MK diagnostic symptoms after 34 months of TCIM interventions.

ASD PATHOGENESIS

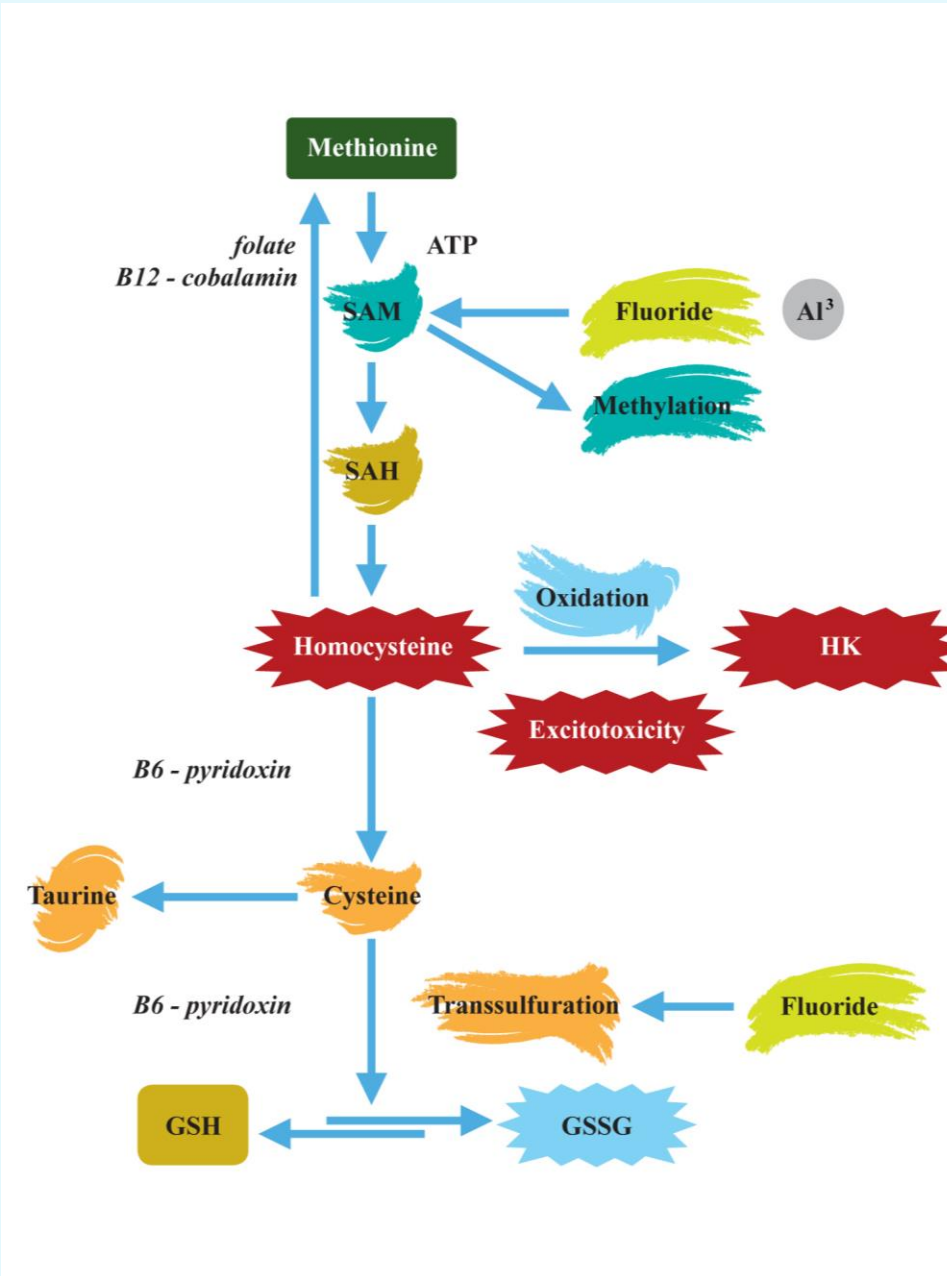


What has emerged is the insight that ASD is a complex, multisystem disorder. Disruptions in energy metabolism resulting in mitochondrial dysfunction, impairment in critical regulation of oxidative stress with disturbances of transmethylation/transsulfuration system and decreased GSH level, produce a systemic disorder that affects brain development and function.

Our immune-glutamatergic hypothesis opens the door to a number of new modes of interventions of ASD. As a multifaceted disorder, ASD requires a multifaceted approach, one that should include the protection against excitotoxicity/microglial activation, the reduction of processed food in diets with glutamate and aspartate-containing additives, and nutrition with special nutrients that have been shown to reduce excitotoxicity and microglial activation.

SPECIAL SUPPLEMENTS AND COMPOUNDS, WHICH ARE KNOWN TO REDUCE

EXCITOTOXICITY	MICROGLIAL ACTIVATION
Methylcobalamin (vitamin B12)	Flavonoids
Pyridoxal-5 phosphate (vitamin B6)	Melatonin
Vitamin E	DHA/EPA
Vitamin C (buffered)	Taurin
CoQ10	Curcumin
Acetyl-L-carnitine	Quercetin
Alpha-lipoic acid	Silymarin
Magnesium glycinate or lactate	Tryptofan
Zinc	Resveratrol



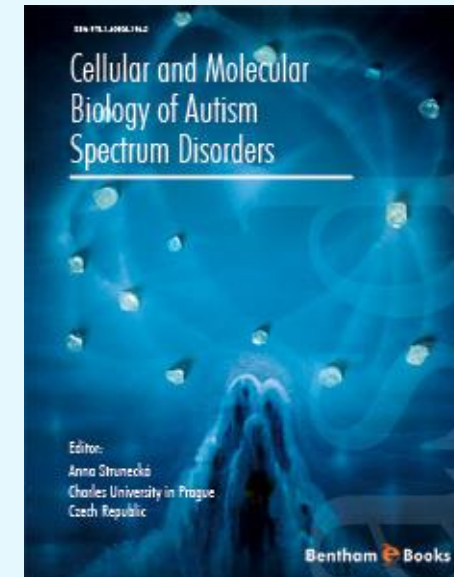
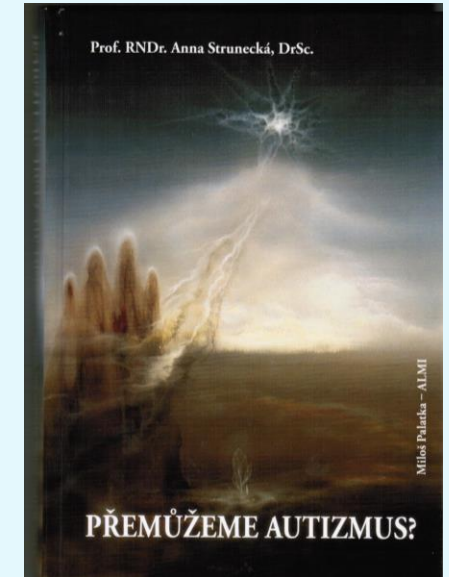
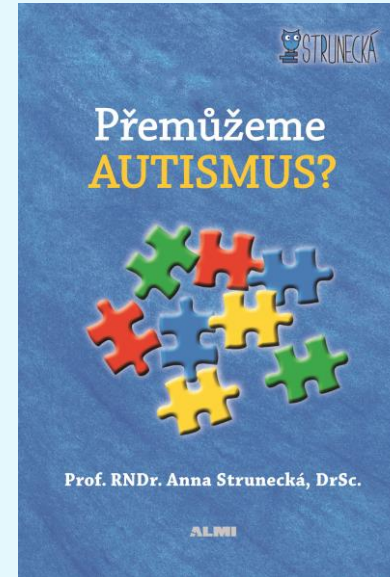
Oxidative stress, defined as an imbalance between oxidants and antioxidants in favor of the oxidants, represents the link between genetic, epigenetic, immunological, and environmental factors underlying ASD. The glutathione (GSH) redox system is most important for reducing oxidative stress. A decrease in GSH is one of the best documented biochemical changes in plasma, immune cells, and brains of children with ASD.

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