



## POSTER PRESENTATION

# Relevance of allostatic load concept – the new notion describing course and outcome of schizophrenia

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### Abstract

**Introduction:** Allostasis is the process that allows the achievement and maintenance of stability through physiological changes. The main mediators of allostasis are hypothalamic-pituitary-adrenal axis hormones, catecholamines, neurotrophins, cytokines and oxidative stress mediators. Allostatic load (AL) refers to variety of mechanisms that are activated in response to stress exposure. Permanent overactivation by chronic stress may lead to maladaptive disease outcomes and this process is called allostatic overload. Several physical health impairments such as obesity, hypertension, type 2 diabetes or cardiovascular diseases might be caused by overload of mechanisms that are responsible for maintaining homeostasis and by overproduction of stress mediators.

**Objectives:** The aim was to provide an evidence that schizophrenia can be perceived in terms of the AL concept with summarizing the current state of understanding on this topic, introducing the AL paradigm as a novel model to explain the course and outcome of this severe mental illness.

**Methods:** Authors, relying on previously published literature, provided a constructive analysis of the publications in a field of schizophrenia research and the AL paradigm, through description, specification, comparison and summary.

**Results:** The AL concept provides possible explanation for the causes, course and outcome of several mental disorders including affective disorders, post-traumatic stress disorder, substance use disorders and Alzheimer's disease. Our group has provided evidence that schizophrenia might be another psychiatric disorder perceived in terms of the AL concept.

**Discussion:** Schizophrenia is a chronic mental disorder with multiple psychopathological domains including positive, negative and affective symptoms, as well as cognitive impairment. Importantly, schizophrenia has been linked to poor physical health status that contributes to excessive mortality. Above mentioned mediators of allostasis are increasingly recognized as core factors in the pathophysiology of schizophrenia.

**Conclusions:** Overwhelming evidence indicates that chronic exposure to stress represents an important etiological and prognostic factor in schizophrenia. This sheds a new light on the biological and clinical sequelae that occur throughout the course of schizophrenia. Therefore, this severe mental illness can be described in frame of the AL concept providing the consensus between neurodevelopmental and neuroprogressive models of schizophrenia conceptualization.

**Supplementary material:** Complete presentation available at <http://ijcnmh.arc-publishing.org>

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