

# Biological psychiatry

## The subject of biological psychiatry

**Biological psychiatry** deals with mental disorders and behavioral disorders from a natural scientific point of view, i.e. it searches for, investigates and explains their causes, consequences and treatment options based on the observation of changes in physical and chemical processes in organisms. Changes in these measurable parameters are related to some theoretical averages understood as a certain "norm".

**As a science**, biological psychiatry tries to grasp the general principles and laws related to mental disorders, i.e. **to know the causes, to determine the consequences and the possibilities of treatment**. Similar to other fields, hypotheses are formulated on the basis of the knowledge gained, and by verifying them, theories and laws can be arrived at. However, the validity of knowledge obtained in psychiatric research is only probabilistic for a certain person. It is given by a personal insight into most of the facts concerning the state of mind, where logic cannot be applied consistently.

## Origins of biological psychiatry

The starting point of biological psychiatry is the assumption that the human mind is connected to the human body to the extent that mental disorders are accompanied or caused by biochemical changes.

More precisely, the first starting point is **the assumption of the unity of mind and body** in the sense that thoughts or feelings are one manifestation and biochemical processes are another manifestation of the same event in the brain.

The second starting point is the causal concept of all natural processes, including the human mind, i.e. **the assumption that everything, including thoughts, feelings and sensations, has a cause**. At the same time, this causality is not simple, but includes both the effects of the internal environment (genetic, endocrine, immunological, biochemical and others) and the effects of the external environment, as their interconnectedness is obvious. It follows from this complexity that the consequence of a certain cause may not be completely unambiguous, but only probable.

## Methods of biological psychiatry

**The methods of biological psychiatry** are primarily based on biochemical, biophysical, neurophysiological, molecular biological, genetic and, last but not least, brain imaging methods. The basic methodological problem lies in the fact that we do not have sufficiently sensitive measurement methods in the field of thinking. We cannot relate the known biochemical events in the central nervous system (CNS) sufficiently accurately and selectively to the symptoms of mental disorders, nor to the mechanisms of their formation and treatment. This is due to the complexity of the brain's function, when even its "normal" functions include more or less obvious (and lasting for a shorter or longer time) deviations from balance, similar to mental disorders. Further progress in this direction can only be imagined through a deeper understanding of the normal functions of the brain.

## Links

### Related Articles

- Biological treatment methods in psychiatry

### External links

1. Teaching materials - biological psychiatry (PowerPoint presentations)
2. Neurochemistry
3. Mechanisms of action of psychotropic drugs
4. Neurobiology of mood disorders
5. The neurobiology of schizophrenia
6. Biochemical investigation methods
7. Experimental methods of biological psychiatry

### Recommended reading

1. Basics of biological psychiatry
2. Introduction to Biological Psychiatry
3. Biochemical hypotheses of affective disorders
4. Fluorescence Spectroscopy in Neuroscience
5. Depression, antidepressants and membranes
6. Selected chapters in psychiatry

