

*Presidenza del Consiglio dei Ministri*



**Abstract**

**NEUROSCIENCE AND PHARMACOLOGICAL  
COGNITIVE ENHANCEMENT: BIOETHICAL ASPECTS**

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After suggesting a definition of enhancement related to the new biomedical technologies, the document, restricts its object to the so-called 'pharmacological neurocognitive enhancement', briefly outlining the state of the art of the current availability and diffusion of drugs and technologies, focusing in particular on the bioethical aspects of the debated use by healthy individuals of neurostimulating drugs. On the basis of the available data at the scientific and empirical level, the Committee expresses some bioethical remarks, evaluations and recommendations.

Generally speaking, the Committee does not deem unlawful a wise and adequately regulated use of safer and more effective cognitive enhancers than those currently available, while emphasizing the many bioethical and policy issues which should also be discussed and addressed. The NBC calls for further research in neurobiological and neuropharmacological fields, recalls the bioethical principles of trials (proportion of benefit/risk ratio, informed consent, approval by the appropriate ethics committee) within trial protocols involving healthy individuals, reflects on the problems of health justice, recommends society should be adequately informed on the risks of these drugs and fosters a public discussion on the more general issues of cognitive enhancement. The Committee also points out how cognitive functions may be improved in a more lasting manner and respecting personal growth through study, a continuous stimulation of interest as well as rich social life and relationships, healthy lifestyles (nutrition, physical activity) and highlights how the over-estimated expectations of enhancing effects of pharmacological neurostimulants stem from a short-sighted vision of human intelligence.