21st Century discoveries in the Physiology of adaptation and dramatic changes in the validation of substance dependence

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The report shows that the current level of physiology does not reveal the biological mechanisms for increasing tolerance in dependence on psychoactive substances. Like, for example, opium (heroin) the addict uses doses repeatedly, almost 10 times, exceeding the lethal for an ordinary person? The traditional H[SODQDWLRQ RI ZKDW JURZV WKH ERG\ V WROHUDQFH LQ UHVSRQVH WR DQ LQFUHDVH LQ GRVH LV LQ system, in particular the adrenal cortex, which produces "adaptation hormones" glucocorticoids, that increase the body's resistance to strong stimuli, the mechanism of "anticipatory excitation" has been evolutionarily laid down, contributing to accumulation of reserves - described in the 30s of the last century by the physiologist P.K. Anokhin. When on any stimulus, the adrenal cortex, as if in anticipation of possible future high costs. Responds with somewhat excessive neurotransmitter release. And due to the excess neurotransmitter release, including auxiliary and

Tissue and adaptation mechanisms, "takes a break" for its own recovery - trophic processes, when the processes of assimilation begin to prevail over the processes of dissimilation and physiological hypertrophy of the cells of the adrenal cortex occurs. Histological evidence comes from Selye's studies of the stress response: "the adrenal glands bloom." And each subsequent increasing dose of the drug is "met" by the hypertrophied endocrine system. And a potentially extreme lethal GRVH RI D SV\FKRDFWLYH VXEVWDQFH KDV D QRQ OHWKDO VXE H[WUHPH H‡HFW RQ WKH ERG\ ,W LV N