

IMPULSIVE AND COMPULSIVE DISORDERS

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The current edition of Psychopharmacology: the Fifth Generation of Progress is unique in including a section on impulsive and compulsive disorders. This is genuinely a novel approach to the characterization of a complex, evolving, and rich area of psychopathology and suggests that compulsive and impulsive phenomena may be alternative phenotypic expressions of similar underlying mechanisms. The section focuses on core symptom domains that cut across impulsive and compulsive disorders and links these clinical phenomena to their fundamental neurobiology, as manifested by genetic factors, neurotransmitter/peptide functioning, and neurocircuitry. This approach is of particular clinical interest in leading the clinician to targeted psychopharmacologic approaches to the core symptom domains. In addition, it has important implications for future categoric classification systems such as the Diagnostic and Statistical Manual and the International Classification of Diseases, which eventually must integrate rapidly emerging genotype and neurocircuitry findings with the core phenomenology of impulsive and compulsive disorders.

Rasmussen and Eisen emphasize how the identification of more homogeneous subtypes via factor-analytic, tic-related, or immune phenomena may have important implications for understanding the course of illness and behavioral phenotype. Pauls and colleagues describe how studying genetic marker (and gene product) data together with data characterizing phenotypic expression in the context of specific environments should allow a more complete examination of the simultaneous contribution of genetic and nongenetic factors in obsessive-compulsive disorder. Rosenberg and MacMillan describe how sophisticated brain imaging studies of obsessive-compulsive disorder may help to deline-

ate specific endophenotypes, discriminate between sporadic and familial forms (reducing genetic heterogeneity), and facilitate an understanding of the developmental neurobiologic underpinnings of obsessive-compulsive disorder. Hollander and Pallanti describe the role of targeted pharmacotherapy and other experimental and somatic treatments in modulating the intensity and frequency of repetitive thoughts and behaviors in obsessive-compulsive disorder. Future approaches will need to integrate our understanding of genotype, neurocircuitry, and subtypes and alternative expressions of the behavioral phenotype into experimental therapeutic strategies for obsessive-compulsive disorder.

Smith and Geary describe how greater attention to the microstructure of the behavior of eating has led to advances in the behavioral neuroscience of the controls of eating. Kaye and Walsh describe psychopharmacologic approaches to the clinical eating disorders and their impact on aberrant feeding behaviors and perception of body image. Swerdlow and Leckman describe efforts to link the clinical phenotype of Tourette syndrome to advances in neuropathology, neuroimaging, genetic linkage, and informative animal models, and the use of endophenotypes for a full understanding of the functional relevance of genes for Tourette syndrome.

Olivier and Young describe how new developments in molecular biology, used to generate inducible and brain region-specific mutants, have provided novel tools with which to study the role of genes, the environment, and their interaction in the causation of aggression, and the neural substrates that mediate this behavior. Coccaro and Siever describe how a better understanding of the role of serotonin and other neuromodulators in the regulation of aggression

has led to a more rational approach to the psychopharmacology of impulsive aggression in humans. Potenza and Hollander describe the neurobiology and treatment of the impulse control disorders and pathologic gambling, disorders linked by a failure to resist urges to engage in pleasurable but ultimately self-destructive behaviors. Stein and colleagues

explore a broad range of self-injurious behaviors, ranging from anxiety-reducing compulsive to pleasurable impulsive variants. They draw parallels with animal stereotypies and propose neuropsychopharmacologic approaches derived from an understanding of the neural contributions to these behaviors.