

DRUG SENSITIVITY OF A COMPUTERIZED NEUROCOGNITIVE TEST BATTERY

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One potential role for the clinical neuropsychologist is to evaluate the effects of centrally-acting drugs; drugs like the stimulants and cholinesterase inhibitors, that may enhance cognitive performance; or anticonvulsants, analgesics and antispasticity drugs (to list a few) that sometimes impair cognition.

The "CNS Vital Signs" battery includes seven tests: Verbal and Visual Memory, Finger Tapping, Symbol Digit Coding, the Stroop test, Shifting Attention and the Continuous Performance Test. The test is about 30 minutes long, is self-administered by patients on an ordinary PC, and is suitable for repeated administration in a medical clinic. Five of the seven tests generate reaction time data, with millisecond accuracy.

Data are presented to support the relative sensitivity of the Vital Signs battery to psychostimulant drugs in a study of 60 patients with ADHD. Significant differences are detected in measures of psychomotor speed, reaction time, complex and sustained attention and executive function, when ADHD patients are treated with psychostimulant drugs. Comparative data from no fewer than 500 patients on antiepileptic drugs, opioid analgetics and antidepressants are also presented. The data were developed in a naturalistic setting using serial assessment techniques.

This evaluation model is suitable for adoption by clinicians, as they follow patients on various medications, and by neuropsychologists who consult to medical practitioners.