

## **The Dopamine Transporter Gene, a Spectrum of Most Common Risky Behaviors, and the Legal Status of the Behaviors**

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### **ABSTRACT**

This study tests the specific hypothesis that the 9R/9R genotype in the VNTR of the dopamine transporter gene (*DATI*) exerts a general protective effect against a spectrum of risky behaviors in comparison to the 10R/9R and 10R/10R genotypes, drawing on three-time repeated measures of risky behaviors in adolescence and young adulthood on about 822 non-Hispanic white males from the Add Health study. Our data have established two empirical findings. The first is a protective main effect in the *DATI* gene from risky behaviors. The second finding is that the protective effect varies over age, with the effect prominent at ages when a behavior is illegal and the effect largely vanished at ages when the behavior becomes legal or more socially tolerated. Both the protective main effect and the gene-lifecourse interaction effect are replicated across a spectrum of most common risky behaviors: delinquency, variety of sexual partners, binge drinking, drinking quantity, smoking quantity, smoking frequency, marijuana use, cocaine use, other illegal drug use, and seatbelt non-wearing. We also compared individuals with the protective genotype and individuals without it in terms of age, physical maturity, verbal IQ, GPA, received popularity, sent popularity, church attendance, two biological parents, and parental education. These comparisons indicate that the protective effect of *DATI*\*9R/9R cannot be explained away by these background characteristics. Our work demonstrates how legal/social contexts can enhance or reduce a genetic effect on risky behaviors.

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