

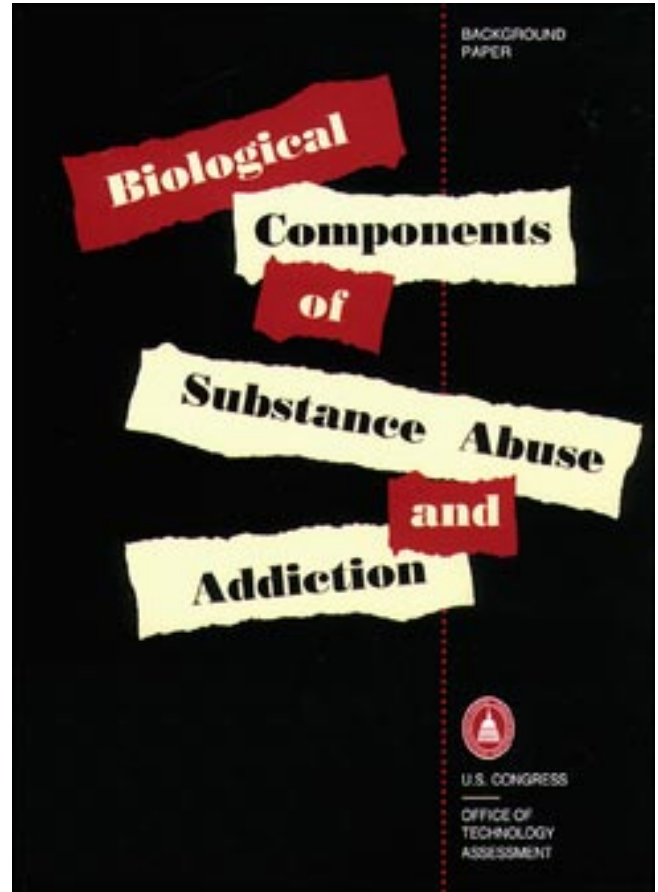
*Biological Components of Substance Abuse
and Addiction*

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Foreword

Substance abuse and addiction are complex phenomena that defy simple explanation or description. A tangled interaction of factors contributes to an individual's experimentation with, use, and perhaps subsequent abuse of drugs. Regardless of the mix of contributing factors, the actions and effects exerted by drugs of abuse underlie all substance abuse and addiction. In order to understand substance abuse and addiction it is first necessary to understand how drugs work in the brain, why certain drugs have the potential for being abused, and what, if any, biological differences exist among individuals in their susceptibility to abuse drugs.

This background paper is the first of two documents being produced by OTA as part of an assessment of *Technologies for Understanding the Root Causes of Substance Abuse and Addiction*. The assessment was requested by the House Committee on Government Operations, the Senate Committee on Governmental Affairs, and the Senate Committee on Labor and Human Resources. This background paper describes biological contributing factors to substance abuse and addiction. The second document being produced by this study will discuss the complex interactions of biochemical, physiological, psychological, and sociological factors leading to substance abuse and addiction.

OTA gratefully acknowledges the generous help of the Advisory Panel, contributors, and reviewers who gave their time to this project. OTA, however, remains solely responsible for the contents of this background paper.

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NOTE: OTA appreciates and is grateful for the valuable assistance and thoughtful critiques provided by the advisory panel members. The panel does not, however, necessarily approve, "disapprove, or endorse this report. OTA assumes full responsibility for the report and the accuracy of its contents.

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