

# Casino Gambling Increases Heart Rate and Salivary Cortisol in Regular Gamblers

## Background

Although the effects of gambling on cardiovascular parameters have been documented, no data exists describing the effect of gambling on stress hormone secretion. Our study investigated the effect of gambling on heart rate and salivary cortisol in a casino environment.

## Methods

Ten male gamblers participated in both an experimental and control session. In the experimental session, gamblers played a game of blackjack using their own money. Gamblers played cards in the same setting during the control condition; however, the game was played for accumulation of points rather than money. Heart rate and endocrine parameters were recorded at baseline, 30 min, and 60 min following commencement of each session, and again at completion of the game.

## Results

Heart rate increased significantly from baseline to 30 min in the experimental session and remained elevated for the remainder of the recording period. Salivary cortisol was raised at 30 min and further elevated at 60 min during gambling, then returned to control levels following completion of the game.

## Conclusions

These data indicate that gambling in a "real life" situation produces increases in salivary cortisol levels that accompany increased cardiovascular activity. Such effects may contribute to the development of gambling addiction.

---

**Biological Psychiatry**

*Volume 48, Issue 9*

*1. November 2000*

*Pages 948-953*

*EMail: [gerhard.meyer@uni-bremen.de](mailto:gerhard.meyer@uni-bremen.de)*