

## Turning Virtual Reality into Reality: A Checklist to Ensure Virtual Reality Studies of Eating Behavior and Physical Activity Parallel the Real World

Aner Tal, Ph.D., and Brian Wansink, Ph.D.

### Abstract

Virtual reality (VR) provides a potentially powerful tool for researchers seeking to investigate eating and physical activity. Some unique conditions are necessary to ensure that the psychological processes that influence real eating behavior also influence behavior in VR environments. Accounting for these conditions is critical if VR-assisted research is to accurately reflect real-world situations. The current work discusses key considerations VR researchers must take into account to ensure similar psychological functioning in virtual and actual reality and does so by focusing on the process of spontaneous mental simulation. Spontaneous mental simulation is prevalent under real-world conditions but may be absent under VR conditions, potentially leading to differences in judgment and behavior between virtual and actual reality. For simulation to occur, the virtual environment must be perceived as being available for action. A useful chart is supplied as a reference to help researchers to investigate eating and physical activity more effectively.

*J Diabetes Sci Technol* 2011;5(2):239-344

---

**Author Affiliation:** Charles H. Dyson School of Applied Economics and Management, Cornell University, Ithaca, New York

**Abbreviations:** (VR) virtual reality

**Keywords:** cognitive processes, consumer psychology, food, judgment and decision making, simulation, virtual reality

**Corresponding Author:** Aner Tal, Ph.D., Food and Brand Lab, 110 Warren Hall, Cornell University, Ithaca, NY 14850; email address [anertal@gmail.com](mailto:anertal@gmail.com)