



## Neuronal ensemble, memory reactivation and its effect on exercise performance

Abhishek Dhawan

Agricultural Development Trust, India

### Abstract

Neuronal ensemble and brain plasticity play an important role in memory consolidation and subsequently memory reactivation. Till date many studies have been designed to study effect of exercise, heart-rate variability and other factors on brain plasticity and memory. We present a case study in which we demonstrate effect of neuronal ensemble and memory formed during High intensity aerobic training (VO2 max) and Target Heart rate (THR) training and its effect of reactivation of same memory on THR and performance. Noteworthy: The reactivation and recreation of memory stimulus learned and formed during High intensity training like place, time, odour and other conditions can elevate THR to same previous peak zone even in low intensity. This demonstrates that reactivation of previously acquired memory or using stimulation of neuronal ensemble of consolidated memory during specific event of training may exert same physiological effect on exercise or body learned during memory acquisition phase. Hence as exercise has effect on memory, memories may have effect on exercise performances.

### Biography

Abhishek Dhawan is a member of American society for nutrition, life member of Indian society of nutrition, had received TEDx Speaker Icon award 2019 awards by Environmental Forum of India.



### Publication

1. Breast cancer cells compete with hematopoietic stem and progenitor cells for intercellular adhesion molecule 1-mediated binding to the bone marrow microenvironment Abhishek Dhawan | Department of Hematology/Oncology, Medical Clinic and Policlinic I, University Hospital, Dresden, Germany.
2. Breast cancer cells reduce the cobblestone areas in HSPC-MSC...Functional Interference in the Bone Marrow Microenvironment by Disseminated Breast Cancer Cells Abhishek Dhawan | Department of Hematology/Oncology, Medical Clinic and Policlinic I, University Hospital, Dresden, Germany.
3. Interaction of Tumor Cells with the Hematopoietic Stem and Progenitor Cell Niche Abhishek Dhawan | Department of Hematology/Oncology, Medical Clinic and Policlinic I, University Hospital, Dresden, Germany.

9<sup>th</sup> International Conference on Food Science & Technology  
March 18-19, 2020 | Frankfurt, Germany

**Author Citation:** Abhishek Dhawan, Neuronal ensemble, memory reactivation and its effect on exercise performance, Food Technology 2020, 9th Conference on Food Science & Technology, March 18-19, 2020, Frankfurt, Germany, 17