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No cardiovascular responses to energy drink consumption in young healthy adult

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Objective Svatikova et al. (2015) in JAMA have conducted a randomized trial of cardiovascular responses to energy drink consumption in healthy adults, and found it significantly increased levels of blood pressure and catecholamines in young healthy adults. Their data were re-analyzed in terms of fractal self-similarity and quantitative difference (QD) in this paper.
Methods 1. The logarithm to base golden section τ (lt) is called golden logarithm. It was found that $\sigma=lt\sigma \approx 0.710439287156503$. 2. For a process from x_1 to x_2, $l_x(1,2)=lt(x_2/x_1)$ and its absolute vale are called the process logarithm and its QD, $QD_x(1,2)$. There are QD threshold values $(\alpha_x,\beta_x,\gamma_x)$ of function x which can be calculated in terms of σ. The function x is kept to be constant if $QD_x(1,2) < \alpha_x$. A function in/far from its function-specific homeostasis is called a normal/dysfunctional function. A normal function can resist a disturbance under its threshold so that $QD_x(1,2) < \beta_x$. A dysfunctional function is defined as the QD is significant if $\beta_x \leqq QD_x(1,2) < \gamma_x$ and extraordinarily significant if $QD_x(1,2) \geqq \gamma_x$. 3. Self-similarity was studied in the fractal literature: a pattern is self-similar if it does not vary with spatial or temporal scale. First-order self-similarity condition leads to the power law between two data sets $A = \{x_i\}$ and $B = \{y_i\}$; $y_i = a_i x_i$ if the QD_i of a_i and the average of $\{a_i\}$ is smaller than $\beta_{min}=\min\{\beta_i\}$ and the average QD of $\{QD_i\}$ is smaller than $\alpha_{min}=\min\{\alpha_i\}$. 4. The σ algorithm for integrative biology was established based on high-order self-similarity.
Results The 18 dimension data set consisted of all the 18 parameters. The first-order self-similarity held for the 18 dimension data sets between after and before for placebo or energy drink, and between placebo and energy drink for the 18 dimension ratio data set of after to before.
Conclusions There may be no cardiovascular responses to energy drink consumption in young healthy adult.