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# Dental & Oral Health

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## Thomas H Loew

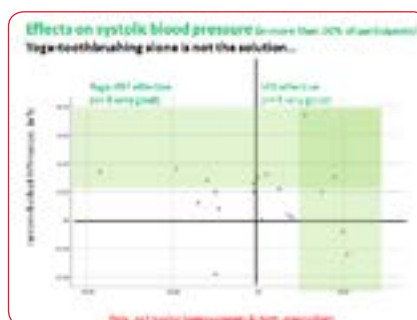
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### New horizons in hemodynamics: Hydrodynamic sonic toothbrush lowers blood pressure significantly - an RCT

**Introduction:** Slow paced breathing (SPB) for some minutes has relevant effects on high blood pressure it improves heart performance, relaxes and reduces anxiety. To get the right rhythm devices like Respire<sup>®</sup>, Decelerbreather<sup>®</sup>, Atemtakter<sup>®</sup> or some apps (e.g. Breathe) are used. Clinical relevant effects are shown already after 3 minutes, two times a day. 3 minutes, two times a day? - The time we use for tooth brushing. So why not get double efficacy? A hydrodynamic sonic toothbrush (HST) can provide acoustic information. The Edel White HST includes a Yoga-Modus: It proposes a rhythm from the Pranayama tradition: After 4 seconds breathing in, the air is hold for 4 seconds followed by 8 seconds expiration.

**Method:** In a controlled randomized trial of cross over design with 20 participants and the effect of this “Yoga-Modus” was compared to standard HST, HST combined with an external breath pacer device in the other hand providing the usual SPB (4 seconds inspiration, 6 seconds expiration) and a combination with a body-oriented technique practiced while brushing. Blood pressure was measured with a wrist monitor before and after brushing.

**Results:** There was a significant reduction of blood pressure observed for standard HST and the Yoga-Modus. But not everybody took profit from the hemodynamic point of view from the standard HST only 10 out of 20 reduced their blood pressure while brushing the teeth. Further 8 participants could profit from the Yoga-Modus. Introducing a respiration regime in a hydrodynamic sonic toothbrush has a helpful physiological impact on blood pressure regulation.



### Recent Publications

1. Satzl M, Schmierer A, Zeman F, Schmalz G and Loew T (2014) Significant variation in salivation by short-term suggestive intervention: A randomized controlled cross-over clinical study. *Head Face Med.* 10(1):49.
2. Lahmann C, Henningsen P, Schulz C, Schuster T, Sauer N, Noll-Hussong M, Ronel J, Tritt K and Loew T (2010) Effects of functional relaxation and guided imagery on IgE in dust-mite allergic adult asthmatics: a randomized, controlled clinical trial. *J Nerv Ment Dis.* 198(2):125-30.
3. Loew T, Gotz K, Hornung R and Tritt K (2009) AFA breathing therapy to prevent burnout for teachers. *Forsch Komplementmed.* 16(3):174-9.

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4. Lahmann C, Nickel M, Schuster T, Sauer N, Ronel J, Noll-Hussong M, Tritt K, Nowak D, Rohricht F and Loew T (2009) Functional relaxation and guided imagery as complementary therapy in asthma: a randomized controlled clinical trial. *Psychother Psychosom.* 78(4):233-9.
5. Lahmann C, Schoen R, Henningsen P, Ronel J, Muehlbacher M, Loew T, Tritt K, Nickel M and Doering S (2008) Brief relaxation versus music distraction in the treatment of dental anxiety: a randomized controlled clinical trial. *J Am Dent Assoc.* 139(3):317-24.

## Biography

Thomas H Loew is doing clinical research in relaxation exercises since 1992. As a psychiatrist and specialist in Psychosomatic Medicine and Psychoanalyst he works on the transfer of simple physiologically founded interventions into general medicine, e.g. hypertension, asthma, headache, somatoform disorders, obesity and specific phobias, for example dental anxiety. He is the President of the German Association for Medical Relaxation Methods, Hypnosis, Autogenic Training and Therapy and Vice-President of the Association of European Physicians for Psychosomatic Medicine.

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