In this double blind, randomized, placebo-controlled, A total of 583 individuals with arterial hypertension have long-term capsaicin has similar effects remains to be determined. Whether directly measured. To challenge osmoregulation, we studied the same parameters (SVRI) using Omron and NexfinTM and both plasma and urine sodium were repeatedly measured. To challenge osmoregulation, we studied the same parameters for 4 hours after a water loading test (20 mL/kg in 20 minutes) combined with the second dose.

Results: We included 12 healthy male subjects (mean age: 23 years). Relative to placebo, 30 min after first capsaicin dose systolic BP significantly increased (after 2 hours: +2.8 ± 1.1 mmHg, p = 0.02), but not diastolic BP (Fig 1A). The second capsaicin dose plus water load increased placebo-subtracted diastolic, but not systolic, BP with 4.2 ± 3.6 mmHg after 30 min (p = 0.04). Compared to placebo, capsaicin did affect neither water balance nor natriuresis (Fig 1B,C). Effects on HR, CO and SVRI did not differ from placebo.

Conclusions: In healthy subjects, capsaicin increased BP on the short term. We could not identify changes in systemic vascular resistance or water and sodium balance, which were thought to underlie the hypothesized BP effects. Whether long-term capsaicin has similar effects remains to be determined.

[Figure 1. Effects of capsaicin vs. placebo (with and without water load) on BP and fractional sodium excretion]