**Supplementary Figures: Legends**

**Supplementary Figure 1.**

Baseline analysis of the mouse isolated stomach spontaneous contractions pre- and post-CTX ±TTX.

**A**. Examples of original recordings showing spontaneous gastric contractions pre- and post-CTX (10-7M) administration followed by the administration of TTX (10-6M). Black arrows show the small amplitude, high frequency (SAHF) contractions, between and superimposed upon the high amplitude, low frequency (LALF) contractions.

**B.** An example of the pressure record averaged (see Methods section 2.3.2) over 10min baseline and between 20 and 30min after CTX (10-7 M) and then after TTX (10-6 M) was added to the CTX (10-7M).The solid line and the pale blue shadow represent the average and the SEM value, respectively. Time 0 corresponds to the peak of each contraction.

**C.** Analysis (see Methods 2.3.1) of the spontaneous contraction amplitude (LALF), frequency and tone from 7 preparations at baseline, post-CTX (10-7 M) and following addition of TTX (10-6 M) to the CTX (10-7 M) administration (see Methods for details). The median value and inter-quartiles are shown together with the individual data points.

**Supplementary Figure 2.**

Lack of effect of CTX on the gastric motility response to electrical stimulation via circumoesophageal electrodes.

**A.** After 20min stabilization, stimulation via circumoesophageal electrodes (red bar,10Hz, 0.5ms, 20V, 1min) markedly reduced the amplitude of spontaneous gastric contractions and reduced tone.

**B** and **C**. After CTX (10-7M) administration, stimulation via circumoesophageal electrodes (red bar,10Hz, 0.5ms, 20V, 1min) was repeated at 15min (B) and 30min (C) and still markedly reduced the amplitude of spontaneous gastric contractions.

**D** and **E**. 20min after increasing the CTX concentration (3x10-7 and 1.3x10-6 M), stimulation via circumoesophageal electrodes (red bar,10Hz, 0.5ms, 20V, 1min) continued to be effective.

**F**. Addition of TTX (10-6 M) in the continued presence CTX (1.3x10-6M) blocked the effects of stimulation via circumoesophageal electrodes (red bar,10Hz, 0.5ms, 20V, 1min)(cf. Fig. 1D in main text).

**Supplementary Figure 3.**

Lack of effect of CTX on the gastric motility response to electrical stimulation via transmural electrodes.

**A.** After stabilization, transmural electrical field stimulation (red bar,10Hz, 0.5ms, 20V, 1min) inhibited ongoing spontaneous gastric contractions and reduced tone.

**B**. After treatment with CTX (10-7M) for 30 min, transmural electrical field stimulation (red bar,10Hz, 0.5ms, 20V, 1min) continued to be effective.

**C**. 20 min after the CTX concentration was increased to 1.1 ×10-6M, transmural electrical field stimulation (red bar,10Hz, 0.5ms, 20V, 1min) continued to be effective.

**D**. Addition of TTX (10-6 M) in the continued presence of CTX (1.1 ×10-6M) blocked the effects of transmural electrical field stimulation (red bar,10Hz, 0.5ms, 20V, 1min) on both contraction amplitude and tone.