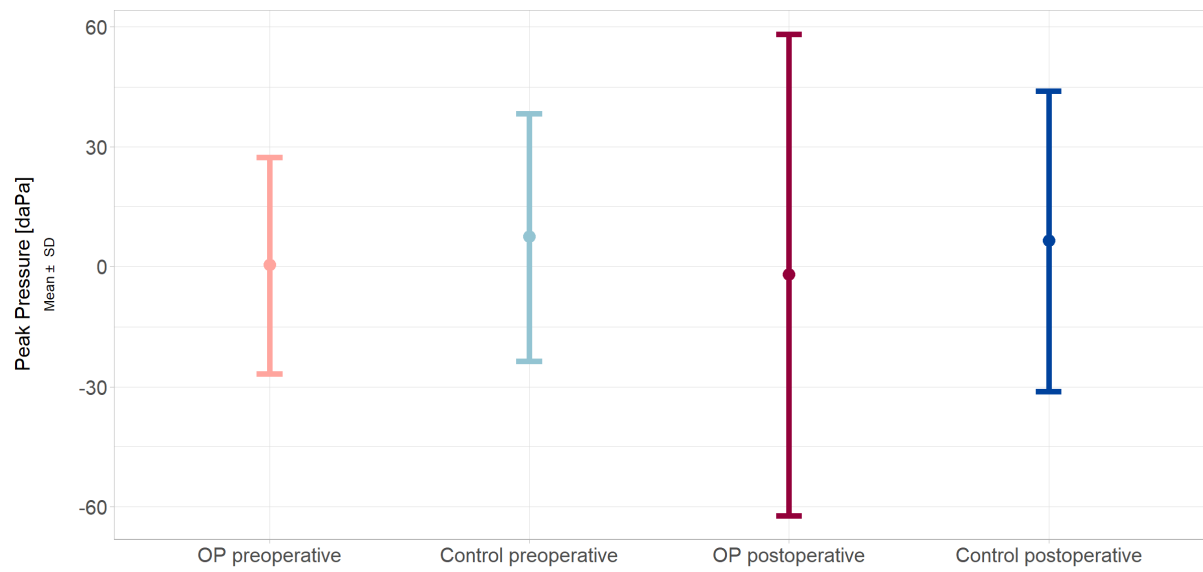


## Supplementary Materials



**Figure S1.** Graphical representation of pre- and postoperative peak pressures for the implanted (OP) and the control ear. Data is shown in *mean* for each measured frequency  $\pm$  *SD*. The *mean* of the peak pressures was for all conditions around ambient pressure (OP preoperative: *Mean* = 0.39 daPa, *SD* = 27.0; Control preoperative: *Mean* = 7.42 daPa, *SD* = 30.93; OP postoperative: *Mean* = - 1.99 daPa, *SD* = 60.16; Control postoperative: *Mean* = 6.50 daPa, *SD* = 37.52). No difference was found between the peak pressures in the different groups (OP vs Control) at the two time points (pre- vs postoperative) (ANOVA:  $F = 0.445$ ,  $p = 0.72$ )

**Table S1.** Mean and SD with results of the paired two tailed *t*- test for all statistically tested frequencies (0.5, 0.75, 1, 2, 3, and 4 kHz) for pre- and postoperative WBTA measurements in the OP and the control ear.

		Control				OP				t- test				
		Mean		SD		Mean		SD		Est.	CI		t	p
500 Hz	Preop.	0.39		0.12		0.36		0.14		- 0.26	- 0.09	0.04	- 0.84	0.41
	Postop.	0.40		0.12		0.35		0.08		0.01	- 0.04	0.06	0.41	0.69
	t-test	Est.	CI	t	p	Est.	CI	t	p					
		- 0.01	- 0.05	0.04	- 0.40	0.70	0.01	-0.04	0.06					
		Mean		SD		Mean		SD		Est.	CI		t	p
750 Hz	Preop.	0.66		0.14		0.59		0.19		-0.07	-0.15	0.01	-1.76	0.09
	Postop.	0.60		0.14		0.48		0.15		0.12	0.04	0.19	3.18	< 0.01*
	t-test	Est.	CI	t	p	Est.	CI	t	p					
		0.06	-0.003	0.11	2.17	0.06	0.12	0.04	0.19					
		Mean		SD		Mean		SD		Est.	CI		t	p
1000 Hz	Preop.	0.76		0.16		0.70		0.17		-0.07	-0.14	0.002	- 1.98	0.06
	Postop.	0.70		0.16		0.60		0.18		0.10	0.03	0.17	2.75	< 0.05*
	t-test	Est.	CI	t	p	Est.	CI	t	p					
		0.05	-0.006	0.10	2.32	0.05	0.10	0.04	0.17					
		Mean		SD		Mean		SD		Est.	CI		t	p
2000 Hz	Preop.	0.72		0.17		0.74		0.15		0.01	-0.05	0.07	0.34	0.73
	Postop.	0.73		0.17		0.76		0.20		-0.02	-0.11	0.07	-0.43	0.67
	t-test	Est.	CI	t	p	Est.	CI	t	p					
		-0.01	-0.09	0.07	-0.20	0.84	-0.02	-0.08	0.04					

		<i>Mean</i>		<i>SD</i>		<i>Mean</i>		<i>SD</i>		<i>Est.</i>	<i>CI</i>	<i>t</i>	<i>p</i>
<b>3000 Hz</b>	<i>Preop.</i>	0.73		0.19		0.71		0.24		0.02	-0.08 0.13	0.50	0.62
	<i>Postop.</i>	0.69		0.19		0.68		0.22		0.02	-0.08 0.12	0.36	0.72
	<b><i>t-test</i></b>	<i>Est.</i>	<i>CI</i>	<i>t</i>	<i>p</i>	<i>Est.</i>	<i>CI</i>	<i>t</i>	<i>p</i>				
		0.05	-0.04 0.14	1.26	0.22	0.03	0.03 0.17	2.99	<b>&lt; 0.01*</b>				
		<i>Mean</i>		<i>SD</i>		<i>Mean</i>		<i>SD</i>		<i>Est.</i>	<i>CI</i>	<i>t</i>	<i>p</i>
<b>4000 Hz</b>	<i>Preop.</i>	0.50		0.23		0.53		0.23		0.04	-0.04 0.12	1.05	0.30
	<i>Postop.</i>	0.46		0.23		0.42		0.20		0.03	-0.05 0.11	0.74	0.47
	<b><i>t-test</i></b>	<i>Est.</i>	<i>CI</i>	<i>t</i>	<i>p</i>	<i>Est.</i>	<i>CI</i>	<i>t</i>	<i>p</i>				
		0.04	-0.05 0.13	0.92	0.36	0.11	0.04 0.19	2.92	<b>&lt; 0.01*</b>				