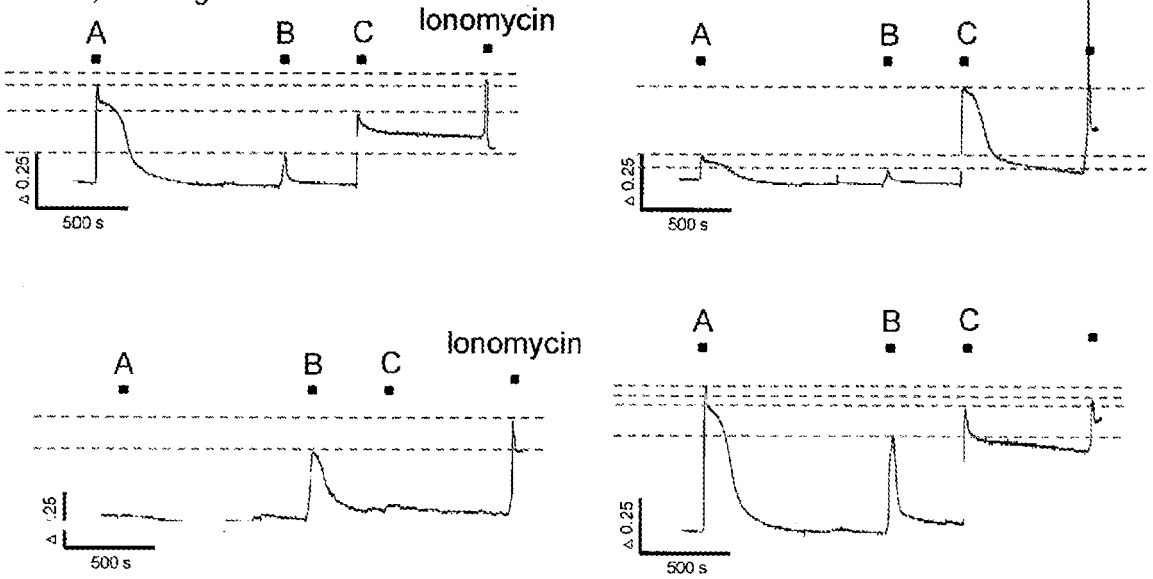
Figure 1

A : 1/800,000 Capsicum extract
B : 1/5,000 Cinnamon extract
C : 1/12,000 Ginger extract



A : 1/20,000,000 Capsicum extract
C : 1/2,000,000 Ginger extract

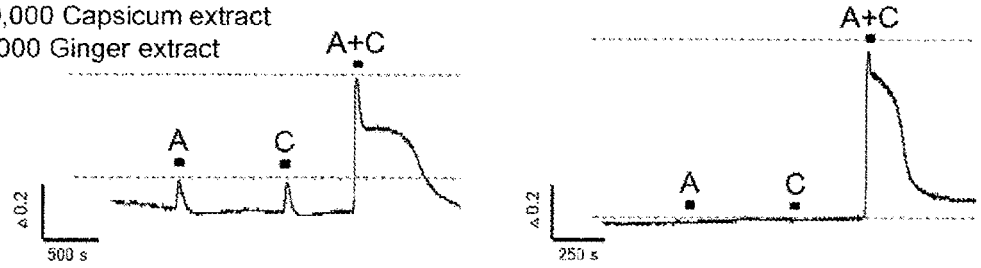


Figure 2

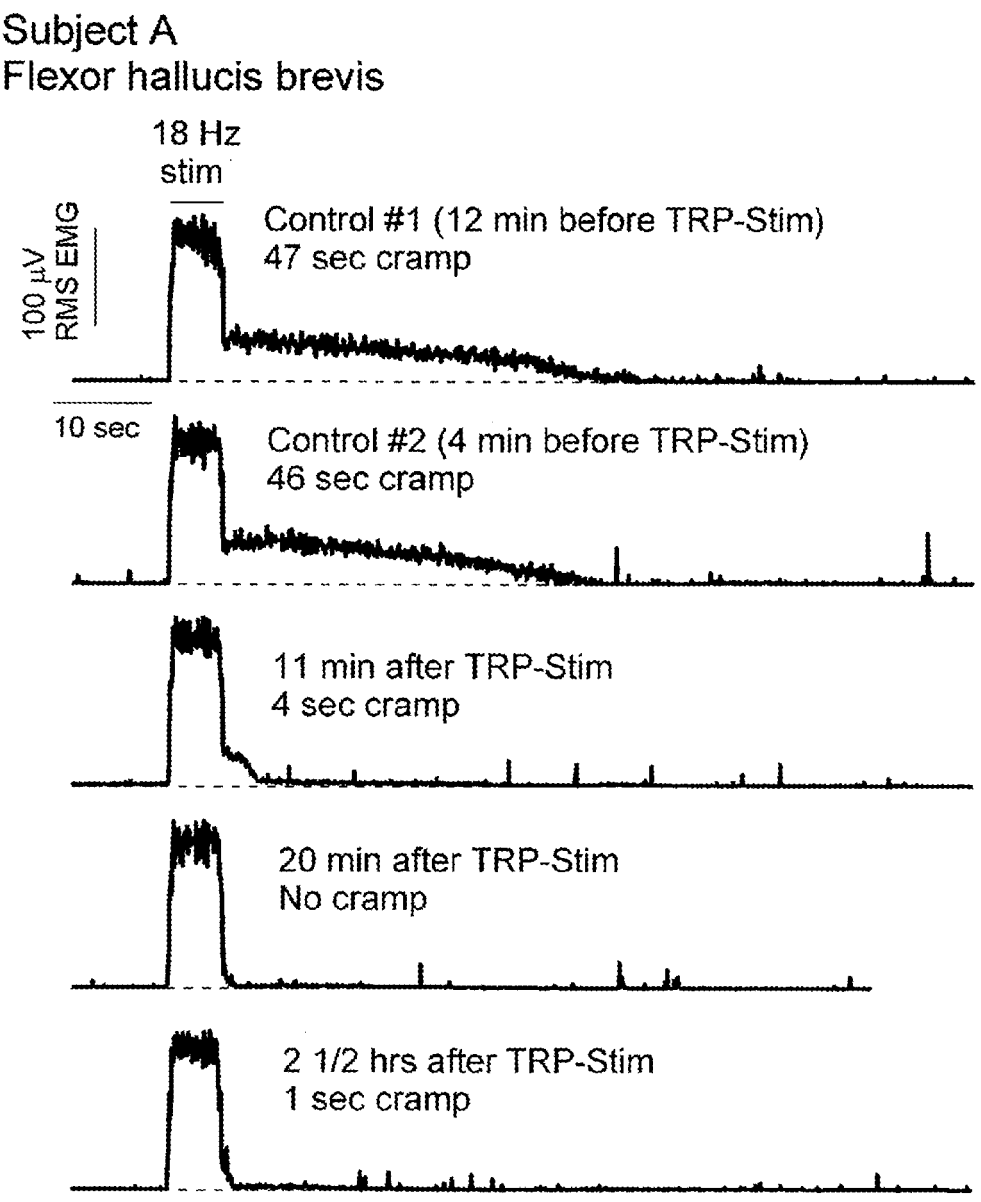

Subject A
Flexor hallucis brevis
18 Hz
stim
100 μV
RMS EMG
Control #1 (12 min before TRP-Stim)
47 sec cramp
10 sec
Control #2 (4 min before TRP-Stim)
46 sec cramp
11 min after TRP-Stim
4 sec cramp
20 min after TRP-Stim
No cramp
2 1/2 hrs after TRP-Stim
1 sec cramp

Figure 3

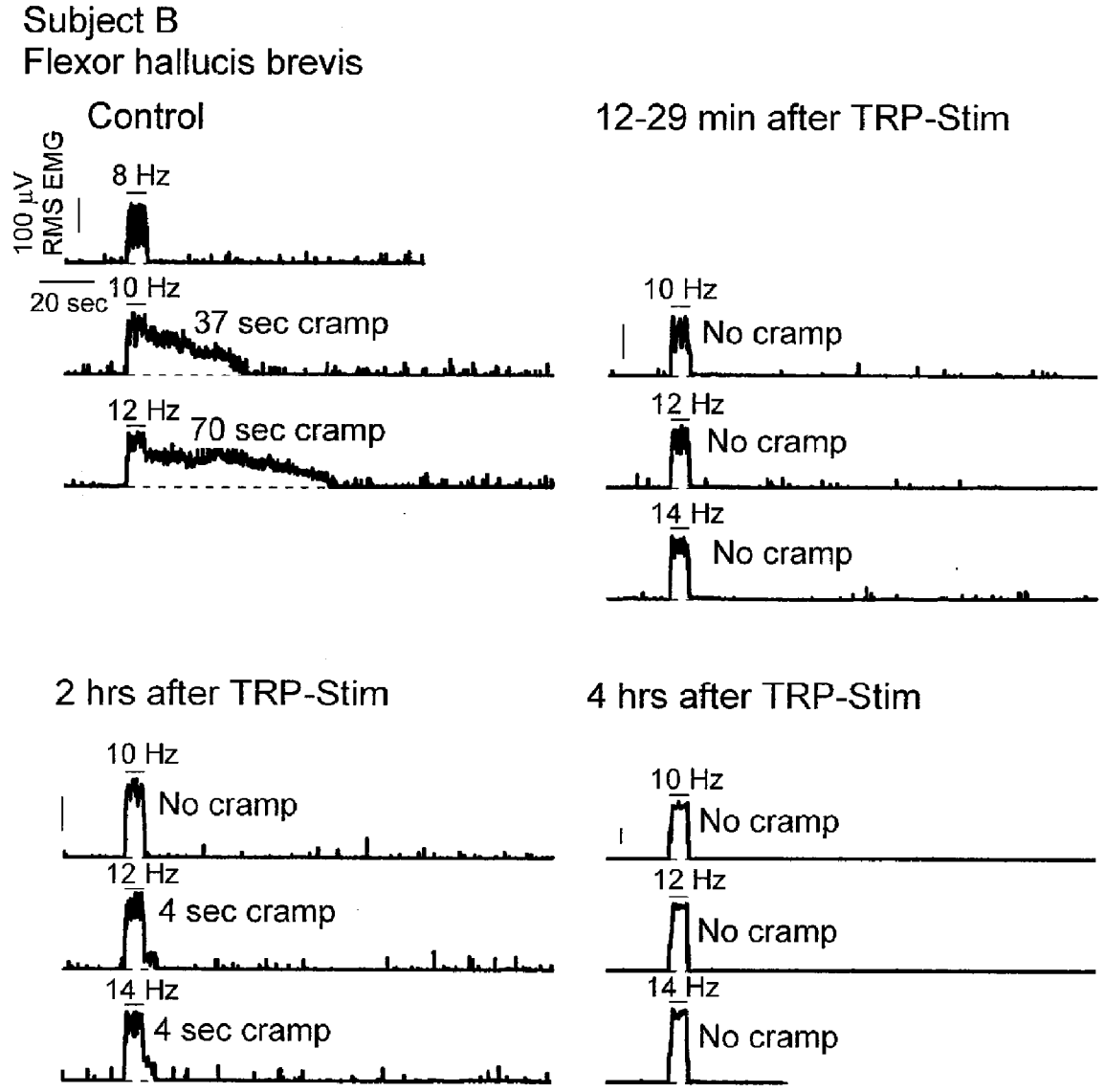

Subject B
Flexor hallucis brevis
Control
12-29 min after TRP-Stim
100 µV
RMS EMG
8 Hz
20 sec
10 Hz
37 sec cramp
12 Hz
70 sec cramp
10 Hz
No cramp
12 Hz
No cramp
14 Hz
No cramp
2 hrs after TRP-Stim
4 hrs after TRP-Stim
10 Hz
No cramp
12 Hz
4 sec cramp
14 Hz
4 sec cramp
10 Hz
No cramp
12 Hz
No cramp
14 Hz
No cramp

Figure 4

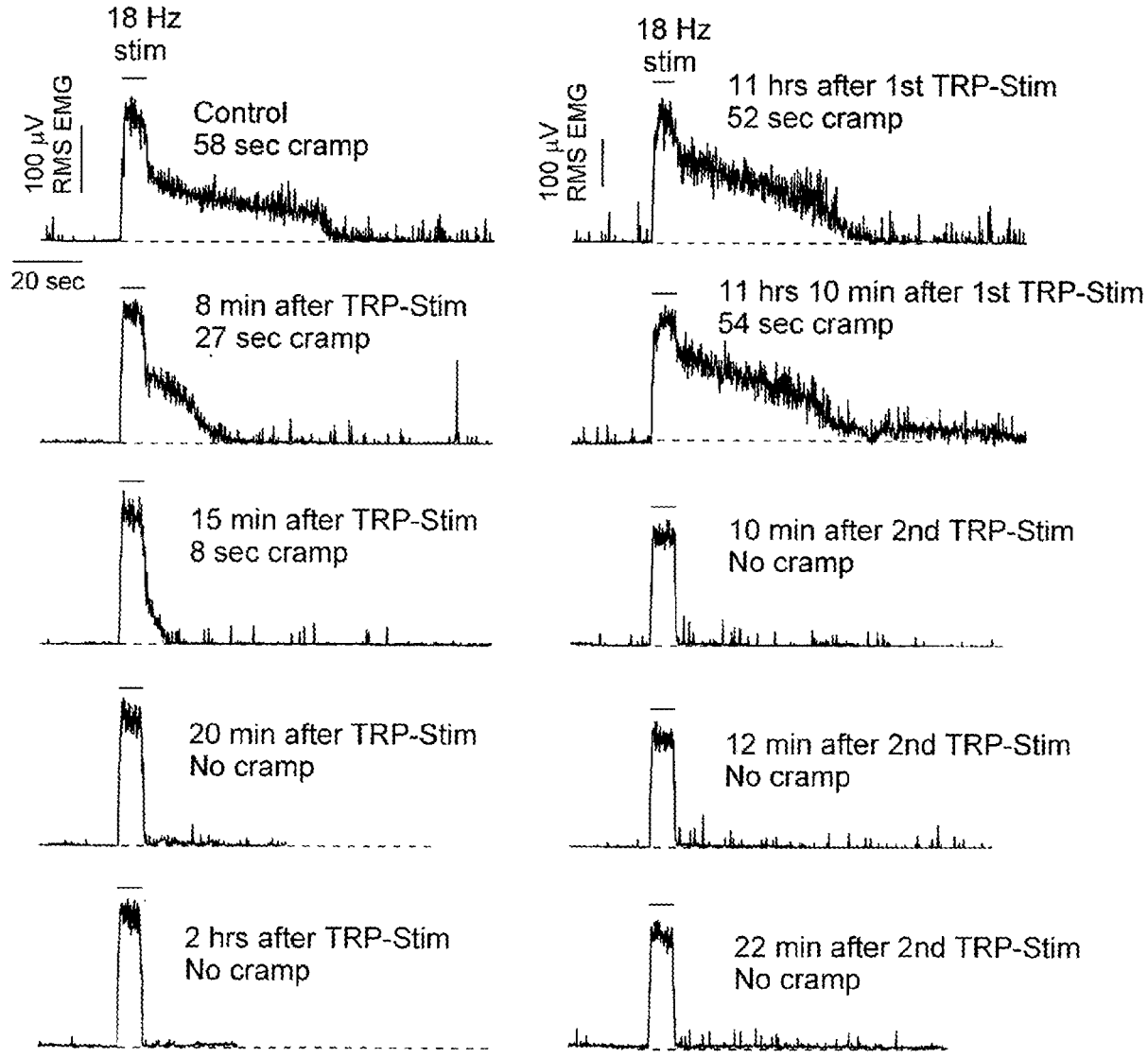

Subject C
Flexor hallucis brevis
18 Hz
stim
100 µV
RMS EMG
Control
58 sec cramp
20 sec
8 min after TRP-Stim
27 sec cramp
15 min after TRP-Stim
8 sec cramp
20 min after TRP-Stim
No cramp
2 hrs after TRP-Stim
No cramp
18 Hz
stim
100 µV
RMS EMG
11 hrs after 1st TRP-Stim
52 sec cramp
11 hrs 10 min after 1st TRP-Stim
54 sec cramp
10 min after 2nd TRP-Stim
No cramp
12 min after 2nd TRP-Stim
No cramp
22 min after 2nd TRP-Stim
No cramp

Figure 5

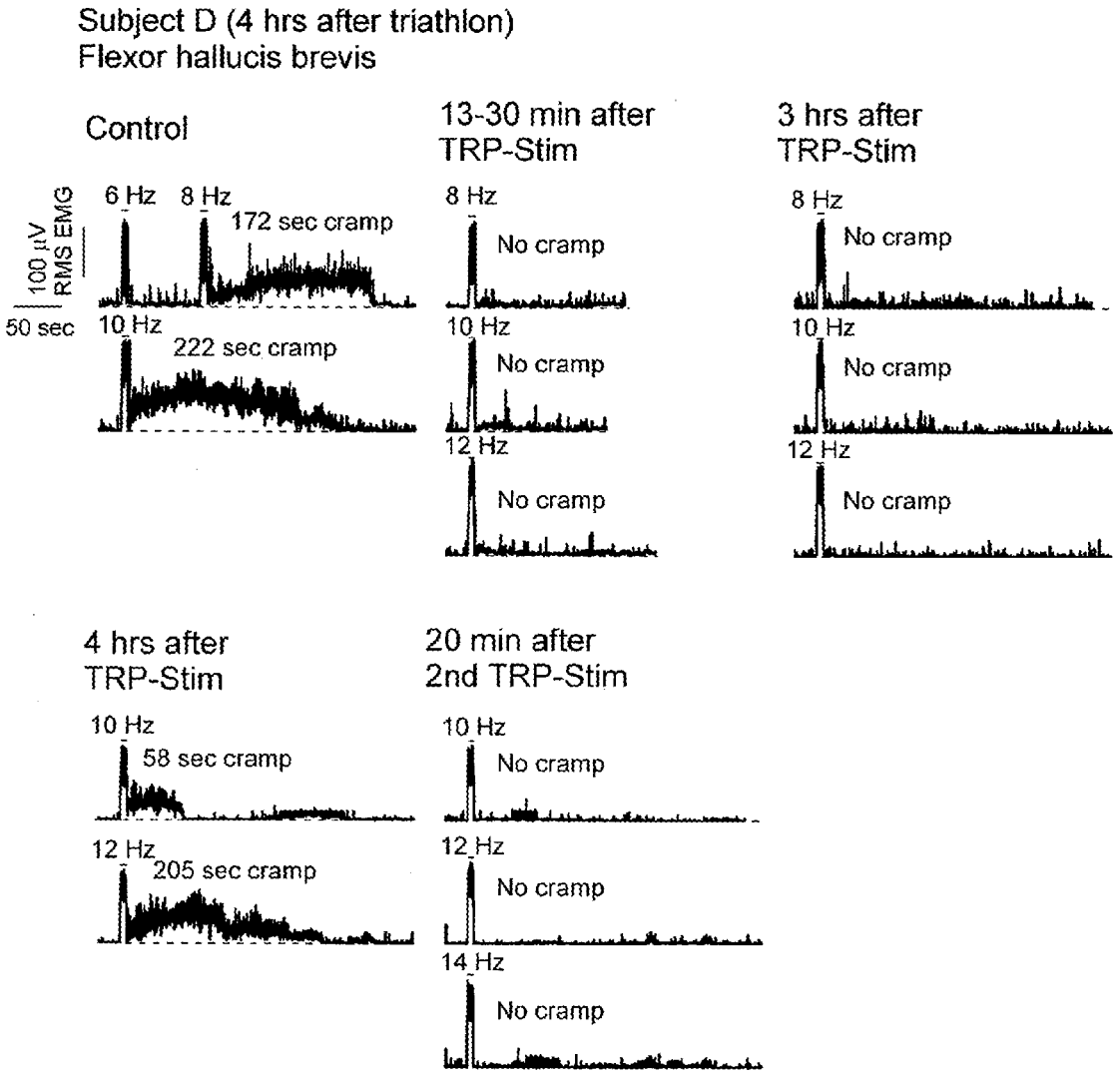

Subject D (4 hrs after triathlon)
Flexor hallucis brevis
Control
6 Hz
8 Hz
172 sec cramp
100 µV
RMS EMG
50 sec
10 Hz
222 sec cramp
13-30 min after TRP-Stim
8 Hz
No cramp
10 Hz
No cramp
12 Hz
No cramp
3 hrs after TRP-Stim
8 Hz
No cramp
10 Hz
No cramp
12 Hz
No cramp
4 hrs after TRP-Stim
10 Hz
58 sec cramp
12 Hz
205 sec cramp
20 min after 2nd TRP-Stim
10 Hz
No cramp
12 Hz
No cramp
14 Hz
No cramp

Figure 6

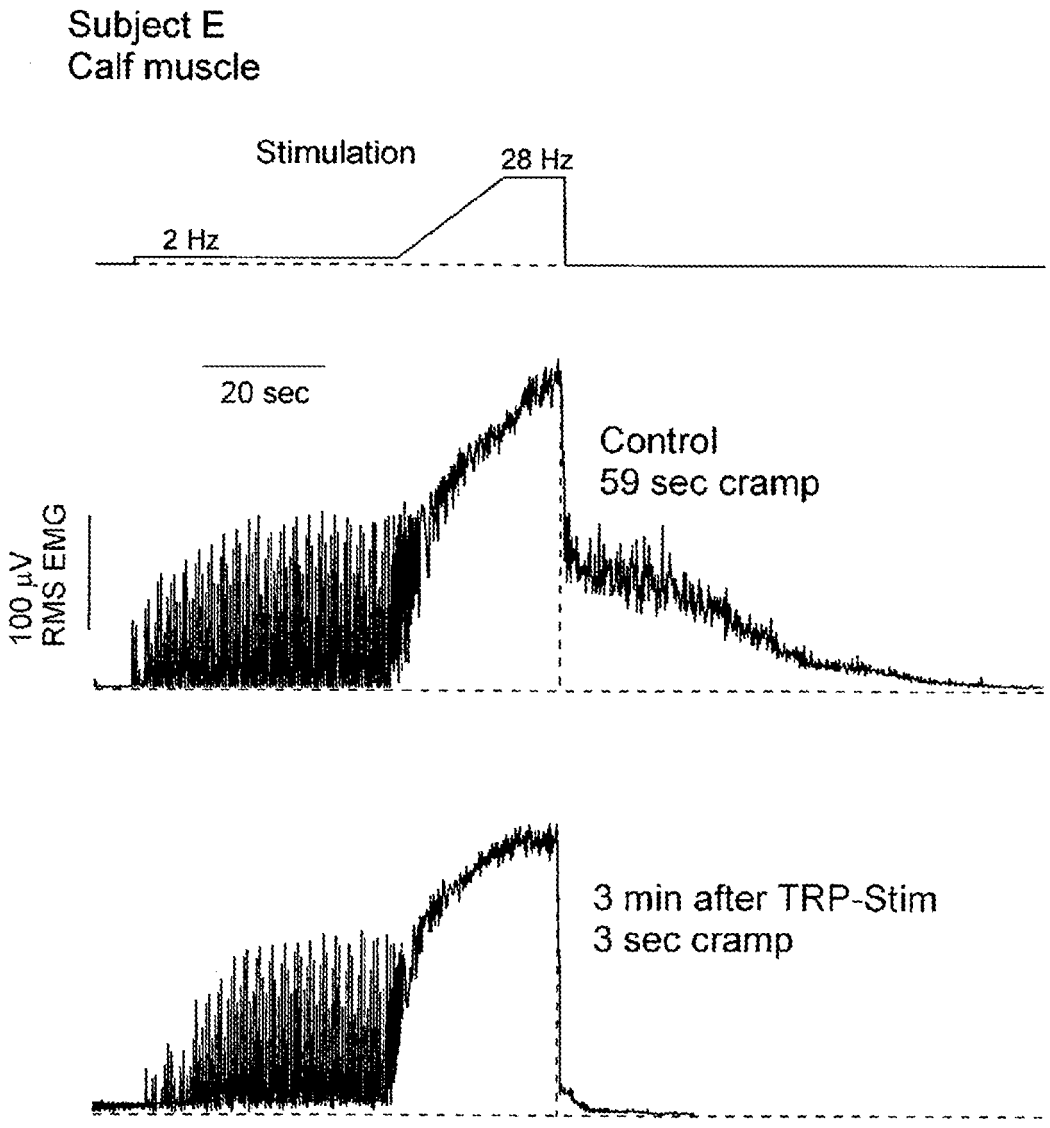

Subject E
Calf muscle
Stimulation
28 Hz
2 Hz
20 sec
Control
59 sec cramp
100 µV
RMS EMG
3 min after TRP-Stim
3 sec cramp

Figure 7

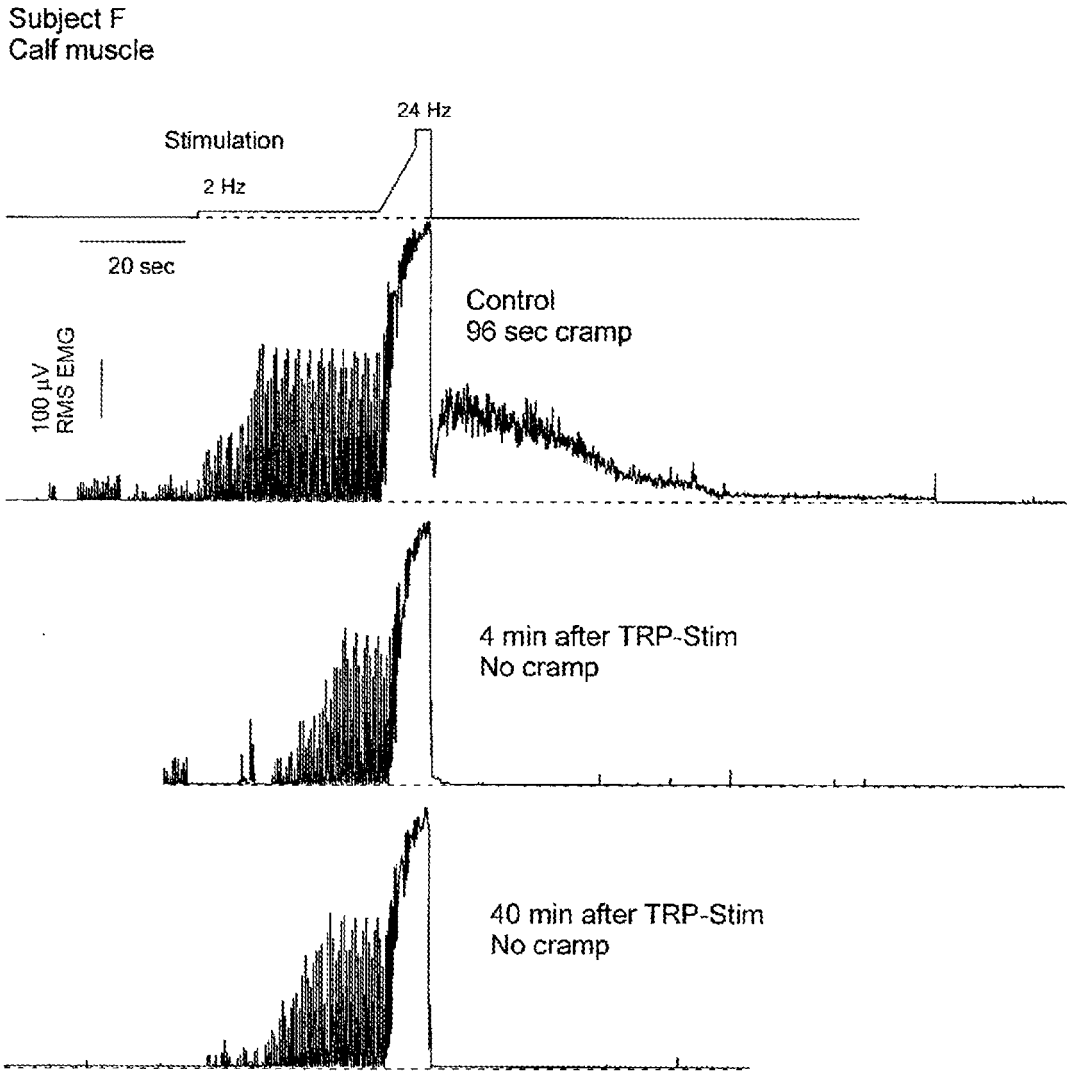
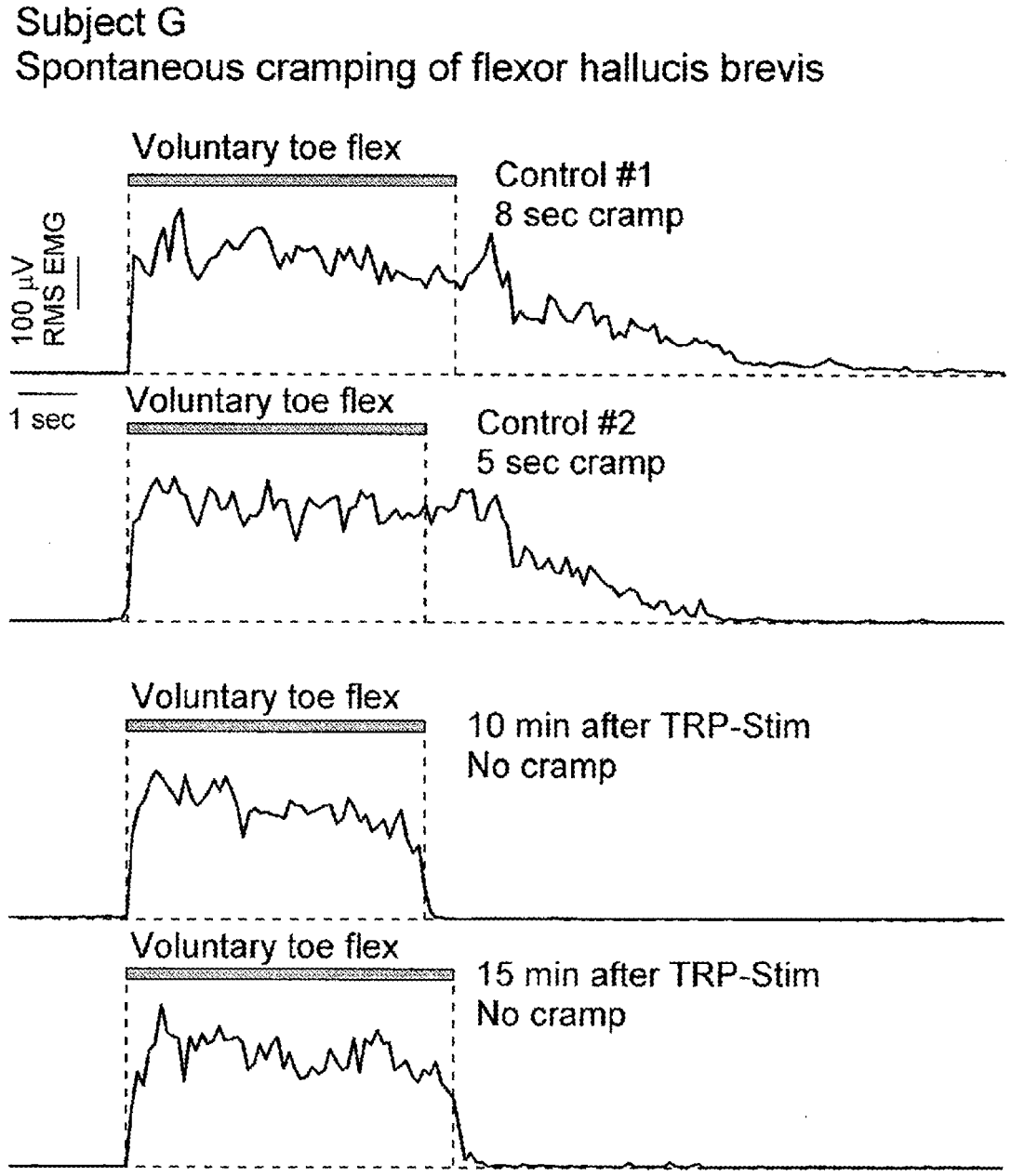

Subject F
Calf muscle
24 Hz
Stimulation
2 Hz
20 sec
100 µV
RMS EMG
Control
96 sec cramp
4 min after TRP-Stim
No cramp
40 min after TRP-Stim
No cramp

Figure 8


Subject G
Spontaneous cramping of flexor hallucis brevis
Voluntary toe flex
Control #1
8 sec cramp
100 µV
RMS EMG
1 sec
Voluntary toe flex
Control #2
5 sec cramp
Voluntary toe flex
10 min after TRP-Stim
No cramp
Voluntary toe flex
15 min after TRP-Stim
No cramp