A Study design

Capsaicin injection

Start recordings

1 min

VAS:
Heart rate
Blood pressure

5 min

Pain sensation

Submaximal masseter muscle contraction (5%, 15%, and 25% MVC)

Submaximal masseter muscle contraction (100%, 5%, 15%, and 25% MVC)

5 sec 5 min 30 sec 5 min 30 sec 5 min 30 sec
MVC Rest 5% MVC Rest 15% MVC Rest 25% MVC

B

- Capsaicin injection (right masseter muscle)
- Intramuscular blood flow probe (right masseter muscle)
- Surface blood flow and temperature probes (three sites)
- Heart rate (right index finger)
Fig. 2

Right masseter muscle

A

Capsaicin

Blood flow (arbitrary units)

Temperature (°C)

Time (sec)

D

Saline

Left masseter muscle

B

Capsaicin

Right middle finger

C

Capsaicin

F

Saline

Blood flow (arbitrary units)

Temperature (°C)

Time (sec)
**Fig. 3**

**A. Before capsaicin**

- Blood flow (arbitrary units)
- Before contraction
- During contraction
- After contraction

**B. After capsaicin**

- Blood flow (arbitrary units)
- Before contraction
- During contraction
- After contraction

*Note: 5%, 15%, 25% MVC*
Fig. 4

Blood flow (arbitrary units)

30 sec

5% MVC 15% MVC 25% MVC
<table>
<thead>
<tr>
<th>Time (0 = injection)</th>
<th>60 sec</th>
<th>10 sec</th>
<th>+300 sec</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sessions</td>
<td>Capsaicin</td>
<td>Saline</td>
<td>Capsaicin</td>
</tr>
<tr>
<td>Systolic blood pressure (mmHg)</td>
<td>124 ± 11</td>
<td>115 ± 14</td>
<td>124 ± 11</td>
</tr>
<tr>
<td>Diastolic blood pressure (mmHg)</td>
<td>69 ± 10</td>
<td>67 ± 7</td>
<td>71 ± 5</td>
</tr>
<tr>
<td>Heart rate (beats per min)</td>
<td>66 ± 8</td>
<td>57 ± 2</td>
<td>65 ± 7</td>
</tr>
</tbody>
</table>