The laser acupuncture intervention
(from “Laser Acupuncture for Chronic Low Back Pain Manual for Therapists”)

At the start of each treatment session greet the patient, and enquire ‘how have you been?’.

- Ask the patient to circle a number on the box scale which described their usual level of back pain[Appendix A(1)].
- Ask patient on adverse effects during week after last treatment, and therapist to tick in relevant box in adverse effects section[Appendix A(2)] .
- Ask patient where there pain is located today and therapist to shade the reported area(s) on body diagram [Appendix A(1)].
- Also enquire if other symptoms eg headache, other joint pains etc are present.

Acupuncture treatment
Treatment based on principles from (Medical Acupuncture MFM 1018: a course offered by Department of Community Medicine and Family Practice. Faculty of Medicine, Monash University 1998)

Treatment is individualised to each patient and over time across sessions.

Start treatment by positioning patient on examination couch, being guided by the distribution of their back pain. Position on their side with worst side uppermost (or if back pain is symmetrical, position in prone position).

- (i)Locate tender points by firm digital pressure in the area of pain – these will often be acupuncture points (midline over GV meridian, or more laterally over inner or outer lines of BL meridian, or over GB meridian). Tender points may extend along meridian as far as knee or more distally. There may be other tender Extraordinary points or unclassified tender points (Ahshi) which may be located and used. Useful local points are indicated in Appendix B. It is suggested to mark the tender points lightly with a provided skin marking pen as they are located. Then treat each point sequentially with the laser probe.
- (ii)You may then treat some distal points meridian points eg GB34/41 or BL60/62 to reinforce the effect, or at initial sessions.
- (iii) Often on taking original history or depending on other current symptoms you may also want to add some other points eg for depression, headache or neck-ache, abdominal symptoms etc. Use major points or local points for these conditions eg LI4,11; TE5, PC6, GB20,21; ST36; SP6; LR3 ; KI3; GV14 etc

When treating points in (ii) and (iii), patients may remain recumbent or may be seated. Locate them by palpation in your usual way and then treat as each point is found (without skin marking) with the laser.

Hold laser pointer perpendicular to the skin with the point in contact with skin but with minimal pressure and little indentation on skin surface.

Please mark all points used on shorthand diagram[see Appendix A(3)] immediately after treating patient
1. Circle main classical points on ‘somatotope’
2. Name all other meridian points and Extra points used not included on ‘somatotope
3. Number of other Ahshi points at locations stated

This information will be useful
a. As a memory aid for you to use in treatment
b. In analysis phase of trial to quantify total number of points used per session and
   and provide data on the actual meridians and acupuncture points used.
General guidelines for treatment Chronic LBP participants in this trial

This trial is selecting a subgroup of less severe patients and without fibromyalgia, and using laser acupuncture for which less pain reactions may be expected.

An approach is to work in periphery initially then add more points from week to week including tender points at site of pain such as over SIJ (BL26-28) depending on response.

Distal points which may be effective are BL62, BL2, BL40, BL11 (influential point for joints), GV14 and other classical or tender points along GV meridian including thoracic region.

For pain treatment may use LI4, ST36, SP6 or ST44 (specifically for leg pain)

May combine SI3 with BL62 on side of pain for more difficult cases.

If depression/anxiety/stress may use LR3 ± (LI4, PC6, HT7 or GV15)

High scores on baseline DASS may help you to decide on using these points.

Distal points usually unilateral on the side of pain if asymmetrical unless-
   (a) after reaction try contralateral point.
   (b) if wanting to reinforce effect in later sessions may try bilateral.

Suggest keep to a maximum of 10-12 points per session (including bilateral) Note in previous trial an average of 8 points were used per session.

Patients will be receiving 10 or 40 seconds stimulation per point. As a general rule try to keep the total number of points the same during a session regardless of the stimulation time.

There is expected to be different approaches used in treating patients between therapists however try to keep to the above general guidelines.

Occasionally a patient may report a marked exacerbation of pain following the previous treatment. This may be due to be in a strong responder or a very sensitized patient. Possible strategies to deal with this at the following treatment-
   (i) be gentle with palpation in locating tender points
   (ii) use fewer treatment points
   (iii) use distal or contra-lateral points away from the local area of pain
   (iv) in the case of subjects allocated 40 seconds stimulation may reduce the duration to 20 seconds per point (indicate this on the treatment sheet if this is done).
Appendix A

Session(    ) Date:                                                                       Code:

(1) **Rating scale for pain** *(participant to mark)*:

Please circle a number on the box scale, which describes your **usual level of back pain in the last week**.

<table>
<thead>
<tr>
<th>No pain</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worst pain imaginable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Therapist to shade distribution of pain in patient today:
(2) **Adverse effects after last treatment** (therapist to mark):

*Did participant notice any of the following symptoms occurring in the week after the last treatment?*

*Please tick if present*

<table>
<thead>
<tr>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flare-up of low-back pain following last treatment</td>
</tr>
<tr>
<td>Lasting less than 24 hrs</td>
</tr>
<tr>
<td>Lasting over 1 day</td>
</tr>
<tr>
<td>Pain coming on at a later time during the week.</td>
</tr>
<tr>
<td>Tiredness</td>
</tr>
<tr>
<td>Increased stiffness</td>
</tr>
<tr>
<td>Headache</td>
</tr>
<tr>
<td>Nausea</td>
</tr>
<tr>
<td>Dizziness</td>
</tr>
<tr>
<td>Fainting</td>
</tr>
</tbody>
</table>

*Anything else noticed? --Please list:*
(3) Acupuncture points used this session  
(please mark on shorthand diagram immediately after treating patient)

(a) ‘Somatotope’

<table>
<thead>
<tr>
<th>Spinous level:</th>
<th>T2</th>
<th>T7</th>
<th>T9</th>
<th>L1</th>
<th>L4</th>
<th>S2</th>
<th>S4</th>
</tr>
</thead>
<tbody>
<tr>
<td>RIGHT</td>
<td>14</td>
<td>13</td>
<td>25</td>
<td>29</td>
<td>30</td>
<td>GT</td>
<td>32</td>
</tr>
<tr>
<td>GB</td>
<td>20</td>
<td>21</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BL outer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BL inner</td>
<td>12</td>
<td>17</td>
<td>18</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
</tr>
<tr>
<td>Huato</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GV</td>
<td>26</td>
<td>20</td>
<td>15</td>
<td>14</td>
<td>9</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>BL inner</td>
<td>12</td>
<td>17</td>
<td>18</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
</tr>
<tr>
<td>BL outer</td>
<td>41</td>
<td>46</td>
<td>47</td>
<td>51</td>
<td>52</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>GB</td>
<td>20</td>
<td>21</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LR</td>
<td>14</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEFT</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: GV9 at lower border scapula, points marked E, H are local Extra points and Huato points respectively, GT is prominence of greater trochanter

(b) other meridian points --

<table>
<thead>
<tr>
<th>Meridians R L</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

(c) Extra points

(d) Ahshi points

<table>
<thead>
<tr>
<th>Iliac crest</th>
<th>R</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower costal</td>
<td>R</td>
<td>L</td>
</tr>
<tr>
<td>Other ahshi</td>
<td>R</td>
<td>L</td>
</tr>
</tbody>
</table>

Comments:
# Appendix B

## Regional points commonly used in low back area

### Posterior

- **GV4**
- **GV3**
- **GV2 sacral hiatus**
- **BL inner line** (1.5 cun or less from midline)
  - BL21-27
- **BL outer line**
  - BL50 (T12)
  - BL51 (L1)
  - BL52 (L2)
  - Yaoyi (L4)
- **BL28 level with S2 posterior foramen**
- **BL32 (over S2 posterior foramen)**
- **BL33 (over S3 posterior foramen)**
- **BL34 (over S4 posterior foramen)**
- **BL35 0.5cun lateral to tip coccyx**
- **BL36 in transverse gluteal fold**

### Lateral points

- **LR13 on lower border free end 11th rib**
- **GB25 on lower border free end 12th rib**
- **GB27, 28 (tender points near ASIS)**
- **GB29**
- **GB30**
- **GB31, 32**

### Extra points

- **Huatuojiaji- 0.5 cun lateral to lower border of spinous process from T1 to L5**
- **Shiqizhui- below spinous process L5**
- **Yaoyi – on outer bladder line level with lower border L4**
- **Huanzhong midway between GB30 and GV2**

Any other Ahshi points (including points around lower costal margin, along iliac crest, in buttock area and over greater trochanter)