Session 7
Nervous System Part II
Department of Naturopathic Medicine
Assessment

Open Book Mid-Semester Exam
Students have 45 minutes to complete this assessment, plus 5 minutes reading time.
Students may use:
• Powerpoint notes (printed)
• Herbal Materia Medica worksheet (printed)

No electronic devices are allowed
Session 7

Nervous System Part II

- Materia Medica (from Traditional literature & research):
  - Lavandula angustifolia
  - Leonurus cardiaca
  - Piper methysticum
  - Rosmarinus officinalis
  - Valeriana officinalis
**Lavandula angustifolia**

**Plant family:** Lamiaceae  
**Part used:** Flower  
**Active Constituents:**  
Volatile oil (linalool); tannins; coumarins; flavonoids; phytosterols; triterpenes  
(Blumenthal et al., 2000; Fisher, 2018)  
**Action:**  
Sedative, hypnotic, anxiolytic, spasmodolytic, carminative, anti-depressant, antimicrobial  
(Braun & Cohen, 2015; Bone, 2003)
Historical & Traditional Prescribing:
Historically:

- Digestive dysfunction, spleen congestion. A diuretic. A gargle for toothache. To restore a lost voice. Passions of the heart and its trembling's, fainting's and swooning's.
- Externally and internally for bites of mad dogs, serpents and other venomous creatures.

(Fisher, 2018)
**Lavandula angustifolia**

**Cautions / Contraindications / Warnings:**
- None known

**Herb/Drug Interactions:**
- None known

**Pregnancy and Lactation:**
- No adverse effects expected
  
  (Bone, 2003)
**Lavandula angustifolia**

<table>
<thead>
<tr>
<th>Preparation</th>
<th>Adult mL/g</th>
<th>Dosage directions &amp; considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td></td>
<td>High doses are said to cause abdominal pain and colic (Bone, 2003)</td>
</tr>
<tr>
<td>Fluid extract 1:2 (60%)</td>
<td>15-30mL/week</td>
<td></td>
</tr>
<tr>
<td>Infusion of dried herb</td>
<td>1-2gm/ dose</td>
<td>Take up to three times per day</td>
</tr>
</tbody>
</table>

(Bone, 2003; Fisher, 2018)

**Taste:** Dry 3\textsuperscript{rd} degree, hot 3\textsuperscript{rd} degree  
(Thomsen & Gennat, 2009)

**Odour:** aromatic, intense and pleasant taste: bitter and pungent  
(Fisher, 2018)
Leonurus cardiaca

Plant family: Lamiaceae  
Parts used: Aerial parts  
Constituents:
- Alkaloids (leonurine), iridoid glycosides, bitters, flavonoids, terpenes, tannins, phenolic acid.  
Actions:
- Sedative, hypotensive, cardiac tonic, anti-spasmodic, emmenagogue.  

(Bone, 2003; Fisher, 2018)
Leonurus cardiaca

Historical & Traditional Prescribing:
Most superior for suppression of the lochia. For delirium tremens, chronic diseases with wakefulness, restlessness, disturbed sleep, neuralgia of the stomach and head, palpitation of the heart, cachexia and an irritable, excitable, enfeebled state of the nervous system, spasms & pain in the pelvic and lumbar regions in females.

(Ellingwood, 1919)
Leonurus cardiaca

Cautions / Contraindications:
• Caution in pregnancy

Herb/Drug Interactions:
• None listed

Pregnancy and Lactation Data:
• Conflicting information regarding safety in pregnancy. Older texts contraindicated, eg BHP (Bone, 2003).
• More recent texts state no C/I (Blumenthal, 1999).
**Leonurus cardiaca**

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<td></td>
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</tr>
<tr>
<td>Fluid extract 1:2 (25%)</td>
<td>15-30mL/ week</td>
<td></td>
</tr>
<tr>
<td>Infusion of dried herb</td>
<td>2-4gm/ dose</td>
<td>Take up to three times per day</td>
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(Fisher, 2018)
Piper methysticum

Plant family: Piperaceae
Part used: Root
Active Constituents:
• Kavalactones: kavain, methysticin, flavonoids (Braun & Cohen, 2015)

Actions:
• Anxiolytic, spasmolytic, hypnotic, sedative, antimicrobial, diuretic, carminative
• Topical rubefacient, local anaesthetic
  (Bone, 2003, Braun & Cohen, 2015)
Historical & Traditional Prescribing:

- Ceremonial herb & a traditional medicine for thousands of years. (Fisher, 2018)

- Neuralgia, particularly of the trigeminal nerve; toothache; earache; ocular pain; reflex neuralgia; anorexia; dizziness and despondency; gonorrhoea; chronic catarrhal inflammations; vesical irritation; painful micturition; dysuria. (Felter & Lloyd, 1898)
Piper methysticum

Cautions and Contraindications:
• Endogenous depression, elderly & Parkinson’s disease (dopamine antagonist). Allergic skin reactions may occur.

Herb/Drug Interactions:
• Additive effect: alcohol, barbiturates, psychopharmacological agents.
• Inhibits P450 cytochrome & affect P – glycoprotein activity altering other drug levels (theoretical)

Pregnancy and Lactation: Contraindicated

(Bone, 2003; Fisher, 2018)
**Piper methysticum**

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<tr>
<td>Oral</td>
<td></td>
<td>Extended continuous use can cause a temporary discolouration of skin, hair and nails. Legislative changes, alcoholic extracts of Kava are no longer used. Tablets from an aqueous extract are now the standard.</td>
</tr>
<tr>
<td>Liquid extract 1:1 (water extract preserved in glycerine)</td>
<td>42-84mL/week</td>
<td>(Bone, 2003)</td>
</tr>
</tbody>
</table>

**Taste:** dry and neutral

(Thomsen & Gennat, 2009)
Rosmarinus officinalis

Plant family: Lamiaceae

Part used: Leaf

Active Constituents: Phenolic acids, tannins, diterpenoid acids; flavonoids, volatile oil

(Braun & Cohen, 2015)

Actions:

• Carminative, spasmylytic, circulatory stimulant, thymoleptic, sedative, antimicrobial, hepatoprotective, antioxidant, tonic, diuretic

• Topically rubefacient, mild analgesic, parasiticide

(Bone, 2003; Fisher, 2018)

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Rosmarinus officinalis

Historical & Traditional Prescribing:

- Used for memory enhancing properties. Was used in ceremonies.
**Rosmarinus officinalis**

**Cautions / Contraindications:**
- Caution for women wishing to conceive, based on the cineole content in its essential oil

**Herb/Drug Interactions:**
- Potential interaction for concomitant administration of rosemary during iron intake. Separate doses.

**Pregnancy and Lactation Data:**
- No adverse effects expected

(Bone, 2003)
**Rosmarinus officinalis**

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<td>Oral</td>
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<td>Contact allergy has been reported for rosemary and may be the result of the constituent carnosol (Bone, 2003)</td>
</tr>
<tr>
<td>Fluid extract 1:2 (60%)</td>
<td>15-30ml/ week</td>
<td></td>
</tr>
<tr>
<td>Infusion of dried herb</td>
<td>2-4gm/ dose</td>
<td>Take up to three times per day (Bone, 2003; Fisher, 2018)</td>
</tr>
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</table>

**Taste:** dry 2\textsuperscript{nd} degree, hot 2\textsuperscript{nd} degree (Thomsen and Gennat, 2009)
Valeriana officinalis

**Plant family:** Valerianaceae

**Part used:** Root, rhizome

**Active Constituents:**
- Iridoids (valepotriates), alkaloids, monoterpenes; sesquiterpenes (Blumenthal et al., 2000; Braun & Cohen, 2015)

**Actions:**
- Anxiolytic, hypnotic, sedative, soporific, mild anodyne, spasmolytic, carminative, hypotensive, anti-convulsant (Bone, 2003; Braun & Cohen, 2015)
Valeriana officinalis

Historical & Traditional Prescribing:

• Used in Roman and Greek times. Dioscorides describing it as a mild sedative (Fisher, 2018)
• A cerebral stimulant. Hysteria, chorea, hemicrania, all with mental depression and despondency; cerebral anaemia; mild spasmodic movements. (Felter & Lloyd, 1898)

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Valeriana officinalis

Cautions / Contraindications / Warnings:
• None known

Herb/Drug Interactions:
• May increase the effects of central nervous system depressants or alcohol.
• May attenuate some symptoms of benzodiazepine withdrawal.

Pregnancy and Lactation:
• No adverse effects are expected (Bone, 2003)
Valeriana officinalis

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<td>Oral</td>
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<td>May take 2 weeks for effects to present. Insomnia: may give a single dose 30 minutes before retiring. Higher doses: sensations of tiredness or drowsiness. Headaches with overdose.</td>
</tr>
<tr>
<td>Fluid extract 1:2 (45%)</td>
<td>15-50mL/ week</td>
<td></td>
</tr>
<tr>
<td>Infusion of dried root</td>
<td>1-3gm/ dose</td>
<td></td>
</tr>
</tbody>
</table>

Taste: Dry 2nd degree, hot 1st degree

(Thomsen & Gennat, 2009)
Recommended Readings


- *Lavandula angustifolia* (p. 613-623)
- *Piper methysticum* (p. 597-605)
- *Rosmarinus officinalis* (p. 846-855)
- *Valeriana officinalis* (p. 1030-1037)
Recommended Readings


- *Lavandula angustifolia* (p.235-238)
- *Leonurus cardiaca* (p. 238-239)
- *Piper methysticum* (p. 330-334)
- *Rosmarinus officinalis* (p. 250-253)
- *Valeriana officinalis* (p. 435-440)
References


References


References


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