

# Menorrhagia: A synopsis of management focusing on herbal and nutritional supplements, and chiropractic.

Anna B. Livdans-Forret, DC\*

Phyllis J. Harvey, M.Ln\*\*

Susan M. Larkin-Thier, DC\*\*\*

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**Introduction:** *To make chiropractors more aware of menorrhagia and how they can serve a role in their patient's care and education since women make up 60% of the population seeking chiropractic care.*

**Method:** *A review of the biomedical literature on menorrhagia was conducted. Items that were retrieved were synthesized and interpreted in order to give the best information to practicing chiropractors.*

**Discussion:** *Most of the information available relative to menorrhagia is medically oriented. Other treatment options can include: chiropractic, various types of herbs, and nutritional supplements.*

**Conclusion:** *Knowledge of medical treatment, nutritional supplements, along with chiropractic treatment options may be beneficial to doctors in their practice.*

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**key words:** menorrhagia, alternative care, nutrition, chiropractic, natural supplements.

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## Introduction

Although there are many types of abnormal uterine bleeding disorders, it is the intent of the authors to focus on menorrhagia for the purpose of this article. Menorrhagia, described as excessive uterine bleeding, affects

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**Introduction :** *Pour sensibiliser davantage les chiropraticiens à la ménorragie et comment ils peuvent jouer un rôle en termes de soins et d'éducation puisque les femmes forment jusqu'à 60% des personnes à la recherche de soins en chiropratique.*

**Méthode :** *On a procédé à un examen de la littérature biomédicale sur la ménorragie. Les éléments qui ont été prélevés ont fait l'objet de synthèses et d'interprétations dans le but de donner la meilleure information pour les chiropraticiens pratiquants.*

**Discussion :** *Une bonne partie de l'information disponible en rapport avec la ménorragie est axée sur la médication. D'autres possibilités de traitement comprennent : la chiropratique, différents types d'herbes et des suppléments nutritionnels.*

**Conclusion :** *La connaissance du traitement médical, des suppléments nutritionnels, ainsi que les options de traitements chiropracteurs peuvent être à l'avantage des médecins dans leur pratique.*

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**mots clés:** ménorragie, soins alternatives, nutrition, chiropratique, suppléments naturels.

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approximately 10 million American women annually, most of whom are in their 40's and 50's<sup>1,2</sup> and accounts for 20% of visits to gynecologists.<sup>3,4</sup> According to the National Board of Chiropractic Examiners (NBCE) survey, in 2005, chiropractors estimate that females account

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\* Corresponding Author, Professor, Palmer College of Chiropractic, 1000 Brady Street, Davenport, Iowa 52803, \ Phone 563-884-5807, Fax 563-884-5470 livdans\_a@palmer.edu

\*\* Associate Professor, Palmer College of Chiropractic, 1000 Brady Street, Davenport, IA, USA 53803.

\*\*\* Associate Professor, Palmer College of Chiropractic, 1000 Brady Street, Davenport, IA, USA 53803.

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for 60% of their patients; of those, 29.8% (17.89% women) are in the 31-to-50-year-old range.<sup>5p95</sup> Menstrual disorder is the only female reproductive condition that chiropractors see more than rarely. Statistics state that chiropractors see women with menstrual disorders at a frequency of 1.5 (sometimes) on a 0–4 scale with 0 being never and 4 being routinely.<sup>5p116</sup> This low rate may be attributable to the fact that few women inform their chiropractor of this problem and few chiropractors ask about it.

In the Greenberg, Quinlan, Rosner Research Inc. (2005) survey of 653 women between the ages of 35 to 39, who have had menorrhagia, 58% did not talk to their health care provider about their problem, 83% felt that their heavy periods were something they had to live with, and 70% had done nothing to learn more about this condition.<sup>6</sup> Shapley, Jordan and Croft (2002) reported that of 22% of women over the age of 35 with heavy bleeding, only 7% discussed their symptoms with their doctor.<sup>7</sup> We feel that it is important for chiropractors to be able to discuss this condition with their patients and offer them management options, including chiropractic care.

## Methods

The focus of this review on menorrhagia is written with the purpose of providing doctors of chiropractic basic information needed for them to advise patients so they can make better informed decisions. We will also summarize types of traditional medical treatments patients may be receiving, in addition to the chiropractic care they seek. In some cases, in order to narrow results, limits for the last 5 years and selection of review articles were placed on results. Items that were retrieved were synthesized and interpreted in order to give the best information to practicing chiropractors. Table 1 gives the details of our search strategy.

## Discussion

### *Etiology*

Knowledge of normal menstrual function is necessary in understanding the etiology of menorrhagia. Regular menstrual bleeding occurs as a result of the release of follicle stimulating hormone (FSH) by the pituitary which stimulates the ovary to mature an egg, while at the same time estrogen causes the endometrium to thicken. After ovula-

Table 1 *Literature Search Strategy*

A review of the biomedical literature on menorrhagia was conducted by searching:

- The National Library of Medicine's Index Medicus via their PubMed database
- Index to Chiropractic Literature (ICL)
- The Manual and Alternative and Natural Therapy Index System (MANTIS)
- Ebscohost's databases Alt-Health Watch, AMED (Alternative Medicine), CINAHL, Academic Search Premier, and Health Source: Nursing/Academic Edition
- MDConsult
- The David D. Palmer Health Sciences Library's online catalog

The following keywords and subject headings/subheadings were used in various combination

- Menorrhagia as a keyword and a MeSH (medical subject heading) term with the subheadings diagnosis, drug therapy, economics, epidemiology, etiology, prevention and control, radiography, radiotherapy, surgery, therapy and ultrasonography
- Menstruation
- Menstrual problems
- Complementary therapies
- Alternative care
- Nutrition
- Surgical treatment
- Hysterectomy
- Ablation therapy
- Chiropractic
- Botanicals
- Diet
- Supplements or natural supplements
- Dietary supplements
- Acupuncture

tion, a small cyst on the ovary produces progesterone; if pregnancy does not occur, progesterone is no longer produced and menses begins. A normal menstrual cycle is considered to occur every 28 days  $\pm$  7 days. The duration of flow is between 2–7 days with a volume loss of less than 80 ml or less than 5 tablespoons.

Menorrhagia is menstruation at a regular cyclical inter-

val with excessive flow and duration; clinically, blood loss is in excess of 80 ml per cycle; or menses lasts longer than 7 days. The bleeding starts on schedule, but it is heavier than usual and may last longer than usual. It is one of the most common complaints in contemporary gynecology.<sup>8</sup> “One in five women in the UK and one in three in the USA have a hysterectomy before the age of 60 years; menorrhagia is the main problem in at least 50% of these women.”<sup>9</sup>

The etiology of menorrhagia includes hormonal, mechanical, and clotting abnormalities. Hormonal causes include: anovulation,<sup>10,11p1208</sup> hypothyroidism,<sup>11p1208, 12p1940,13,14p645</sup> Mechanical causes include: cancer,<sup>4,8, 12p1940</sup> endometriosis, and endometritis.<sup>3,8,15</sup> Clotting abnormalities include: vitamin K deficiency, and circulating inhibitors of coagulation.<sup>16</sup> It is important to evaluate younger patients for vonWillebrand’s Disease (vWD), a bleeding disorder in which heavy menstrual bleeding is a common clinical manifestation.<sup>11p1207,17p2337,18</sup> The American College of Obstetricians and Gynecologists recommends that testing for vWD be performed in adolescents with severe menorrhagia before initiating hormone therapy.<sup>18</sup> See Table 2 for additional etiology of menorrhagia.

It is currently believed the endometrium’s control of arachidonic acid supply for prostaglandin synthesis is altered with menorrhagia. The menorrhagic endometrium incorporates arachidonic acid into neutral lipids to a much greater extent than normal, with lower than normal incorporation into phospholipids. The greater arachidonic acid release during menses results in higher production of series 2 prostaglandins, which are thought to be the major factor in the excessive bleeding at menstruation.<sup>16</sup>

Menorrhagia must be distinguished from other common patterns of abnormal bleeding. See Table 3 for a list of differentials.

**Health history**

Any deviation in a women’s menstrual cycle should be investigated.<sup>3,8,15</sup> Previous medical and menstrual history related to a patient with menorrhagia may often be more revealing than laboratory tests. Questions asked should eliminate the possibility of pregnancy and provide a clear description of the quantity and quality of the bleeding, the patient’s sexual history, and the patient’s age.<sup>8,12p1940</sup> Sexual activity needs to be questioned, since infections

Table 2 *Additional Etiology of Menorrhagia*

<p>Hormonal Abnormalities</p> <ul style="list-style-type: none"> <li>• Luteal phase defects</li> <li>• Stress</li> <li>• Exogenous hormones</li> <li>• Ovarian Cysts</li> </ul> <p>Mechanical Abnormalities</p> <ul style="list-style-type: none"> <li>• Uterine Polyps</li> <li>• Uterine Fibroids</li> <li>• Intrauterine devices</li> <li>• Atopic pregnancy</li> <li>• Pregnancy</li> </ul> <p>Clotting Abnormalities</p> <ul style="list-style-type: none"> <li>• Drug induced hemorrhage</li> <li>• Dysproteinemias</li> <li>• Disseminated intravascular coagulation</li> <li>• Severe hepatic disease</li> <li>• Primary fibrinolysis</li> </ul>
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Table 3 *Menorrhagia Differentials*

<ul style="list-style-type: none"> <li>• Menorrhagia – menstruation at regular cyclical interval with excessive flow and duration; clinically, blood loss is in excess of 80 ml per cycle; or menses lasts longer than 7 days<sup>8</sup></li> <li>• Metrorrhagia – intermenstrual bleeding occurring at any time between menstrual periods<sup>17p1355</sup></li> <li>• Hypomenorrhea – (cryptomenorrhea)-unusually light menstrual flow, sometimes only spotting, or a deficient amount of menstrual flow<sup>17p1052</sup></li> <li>• Menometrorrhagia – bleeding that occurs at irregular intervals or bleeding during and between menstrual periods in which amount and duration of bleeding may also vary<sup>17p1339</sup></li> <li>• Polymenorrhea – menstrual periods occurring with abnormal frequency<sup>17p1726</sup></li> <li>• Oligomenorrhea – periods that occur more than 35 days apart or scanty or infrequent menstrual flow<sup>17p1516</sup></li> <li>• Dysfunctional menses – abnormal uterine bleeding without any obvious structural or systemic abnormality<sup>8,19</sup></li> </ul>
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Table 4 *Must Ask Health History Questions*

- The length and subjective assessment of blood flow
- Deviation in menstrual cycle
- Previous medical history
- Patient's sexual history
- Patient's age
- Means of contraception
- History of natural supplement usage

may cause a change in previous menstrual bleeding patterns. Another factor to consider while taking the history includes the use of intrauterine devices as a means of contraception, as they may cause increased uterine cramping or menstrual flow.<sup>8</sup> History of natural supplement usage should be obtained, particularly ginseng extract, which as been shown to cause excessive bleeding in some women.<sup>20</sup> Post menopausal women who present with any type of uterine bleeding should immediately be evaluated for malignancy.<sup>11p1208,12p1941</sup> See Table 4 for a summary of “must ask” health history questions.

#### *Laboratory tests*

For all patients with menorrhagia, laboratory tests should include pregnancy testing and complete blood count (CBC) to assess severity of blood loss and exclude thrombocytopenia and leukemia.<sup>13,21p555</sup> Anemia is more likely in women with a blood loss of 120 ml rather than the previously noted 80 ml standard.<sup>22</sup> One study done in Denmark in 1998 did find that of 268 women, those with moderate bleeding (12%) and those with strong bleeding (21%) had iron deficiency as compared to the remaining with minimal blood loss.<sup>23</sup>

A thyroid stimulating hormone level should be checked to assess for hypothyroidism, as 2/3rds of women with this condition will develop aberrant menses.<sup>11p1208,12p1941,13,14p644</sup>

Additional laboratory tests that could be performed include: platelet count, creatinine, blood urea and nitrogen level (BUN), serum progesterone levels, and cervical smears for cytology.<sup>13,24</sup>

#### *Diagnostic procedures*

A transvaginal sonogram (TVS) has become an integral initial component in the evaluation of women with abnor-

mal uterine bleeding.<sup>14p648,25</sup> Uterine imaging can help to differentiate anovulatory bleeding from anatomic causes, myomas, endometrial polyps, and uterine fibroids.<sup>14p648,21p556</sup> It has 80–97% sensitivity and 69–70% specificity in the detection of polyps and myomas.<sup>14p648,25</sup> Assessment of endometrial thickness is also done with use of TVS and helps distinguish bleeding due to atrophy versus that of hyperplasia.<sup>12p1941,13</sup> Additional imaging can be done with computerized tomography (CT), which is used to further investigate potentially malignant pelvic masses.<sup>13</sup> An MRI can definitively diagnose submucous myomas and adenomyosis; compared to the TVS, it is less dependent on operator experience, uterine position, and size.<sup>14p649,24</sup>

#### *Pharmacological management options*

When a woman seeks medical attention for the treatment of menorrhagia, she may be faced with several pharmacological options. Generally, the medical practitioner will prescribe one of three common types of medications. The options include: nonsteroidal anti-inflammatory medications, oral contraceptives, and medicated intrauterine devices.

Nonsteroidal anti-inflammatory drugs act by reducing the prostaglandin levels resulting in a reduction of menstrual flow by 22–50%. There are several types of oral contraceptives which act to suppress pituitary gonadotropin release, therefore, preventing ovulation and reducing blood flow by 50–60%.<sup>8,26</sup> Progestin is the most commonly prescribed for menorrhagia.<sup>8</sup> Gonadotropin-releasing hormone agonist oral contraceptives are another option, which act by inhibiting the release of FSH and LH from the pituitary. This medication is used for a short time period due to high costs and possible severe adverse reaction.<sup>8,25,27</sup> The side effects caused by these medications are a frequent reason women discontinue the use of these medications

The third category of pharmacological options is medicated intrauterine devices (IUD), which release hormones directly in the uterine endometrium. In the United States 2 forms of IUD are approved for the treatment of menorrhagia, Progestasert and Levonorgestrel-releasing IUDs. Progestasert IUD is found to be 65% effective, while the Levonorgestrel IUD (LNG-IUD) is 80–90% effective in reducing menstrual blood loss.<sup>26,28</sup> See Table 5 for summary of side effects associated with each type of medication.

Table 5 Side Effects of Pharmacological Management

<p>Nonsteroidal anti-inflammatory medication<sup>8,25,26</sup></p> <ul style="list-style-type: none"> <li>• Limited side effects, due to short term use</li> </ul>
<p>Oral contraceptives<sup>8,26,27</sup></p> <ul style="list-style-type: none"> <li>• Break through bleeding</li> <li>• Nausea</li> <li>• Weight gain</li> <li>• Headache</li> <li>• Breast tenderness</li> <li>• Thrombosis or embolism</li> </ul>
<p>Prolonged use of Gonadotrophin-releasing hormone agonist medication<sup>8,25,27</sup></p> <ul style="list-style-type: none"> <li>• Bone demineralization</li> <li>• Reduction of high-density lipoproteins</li> </ul>
<p>Medicated intrauterine devices<sup>28</sup></p> <ul style="list-style-type: none"> <li>• Low rate of side effects</li> </ul>

Table 6 Advantages of Minimally Invasive Surgical Procedures

<p>Hysteroscopy</p> <ul style="list-style-type: none"> <li>• Allows visualization of the uterine cavity<sup>29,30</sup></li> </ul>
<p>Endometrial resection and ablation therapy</p> <ul style="list-style-type: none"> <li>• Relief of symptoms</li> <li>• Less invasive</li> <li>• Less costly</li> <li>• Decreased morbidity as compared to hysterectomy</li> </ul>

**Surgical management options**

There are several common surgical procedures for evaluation and treatment of menorrhagia. These procedures range from minimally invasive to the removal of the uterus. The one-time standard procedure to obtain endometrial sampling, dilation and curettage (D and C), has been replaced with endometrial biopsy as a D and C is a surgical intervention that only provides short term relief.<sup>9</sup> Currently, a hysteroscopy is the procedure of choice to obtain endometrial biopsies and to perform other medical procedures.

Since the early 1990's, endometrial resection and abla-

tion procedures have become common for the treatment of menorrhagia. These include: transcervical resection of the endometrium, roller ball endometrial ablation, endometrial laser ablation or resection, uterine balloon therapy microwave endometrial ablation alternative and hot-water instillation system (*HydroThermAblator TM*).<sup>8,9,26,30</sup> There are risks associated with these procedures, such as uterine perforation with the transcervical resection and the Roller-ball endometrial ablation and vaginal burns from the *HydroThermAblatorTM*.<sup>8,26</sup> See Table 6 for a summary of advantages of minimally invasive surgical procedures.

Hysterectomy provides a definitive cure for menorrhagia, however, the recent literature more often relays there is a definite preference for the less invasive and simpler techniques that decrease morbidity and preserve fertility.<sup>9,28</sup> In fact, the American College of Obstetricians and Gynecologists recommends hysterectomy only in patients for whom hormone management has failed.<sup>26</sup> The morbidity rate alone is usually 40%<sup>8</sup> but perioperative complications range from 16.5–41.9% for vaginal hysterectomies to 15–52% for abdominal hysterectomy.<sup>25,27</sup> The risks associated with a hysterectomy include those of any major surgery, as well as documented reduced bowel frequency and persistent increased urinary frequency following hysterectomy.<sup>31</sup>

**Nutritional supplements**

A variety of different herbal supplements have been used to treat menorrhagia. The goals of alternative treatments of menorrhagia are the same as the goals of conventional treatment: control the bleeding, prevent and treat anemia, and restore an acceptable menstrual pattern.<sup>32p4</sup> A review of literature demonstrated that a variety of different supplements were recommended. The correct dosage on these herbs is critical, so the chiropractor should consult a botanical or herbal reference text to insure correct amounts.

Chaste Tree-chasteberry (vitex agnus castus) is probably the best-known herb in Europe for treatment of hormonal imbalances and abnormal bleeding in women; it has been used for the full scope of menstrual disorders.<sup>16,32p9,33p240–243,34p98–99,35p60,36,37,38p147,39p62,40</sup> It acts upon the hypothalamus and pituitary gland with its progesterone-like effect, increasing lutenizing hormone and inhibiting the release of FSH resulting in a shift of the ratio of estrogen and progesterone.<sup>35p60</sup> In a study of 126 women with menstrual disorders, 58 of the women had a

decrease in the number of heavy bleeding days using 15 drops of liquid extract.<sup>16,32p8</sup> Pregnant women should not use this as it can cause miscarriage.<sup>34p98-99</sup> Chaste tree is probably the most important herb to normalize and regulate the menstrual cycle, but it is not a fast-acting herb and it may take several months to achieve results.<sup>16,32p9,35p60</sup>

Ginger (*zingiber officinale*) has been shown to inhibit prostaglandin synthesis, the enzyme believed to be related to the altered prostaglandin-2 ratio associated with excessive menstrual loss. Inhibition of prostaglandin and leukotriene formation could explain ginger's traditional use as an anti-inflammatory agent, and anti-inflammatories are effective in reducing the flow from heavy menses.<sup>16,32p9</sup>

#### *Traditional astringent herbs*

Astringent herbs form a large category of tannin-containing plants that are used to reduce blood loss from the reproductive tract as well as the gastrointestinal tract, respiratory tract and skin. In the reproductive tract, the astringent herbs are used to correct uterine or cervical bleeding. Of these, shepherd's purse has a long history of use in the management of preventing or arresting gynecologic hemorrhage.<sup>16,32p9</sup> In most cases these herbs are used in combination formulations for weeks and possibly months to be effective.

#### *Traditional uterine tonics*

In traditional herbal medicine, uterine tone determines the ease of menstrual flow, therefore, if the uterus is hypotonic, there may be heavy bleeding. Improving uterine tone may normalize and regulate menstrual bleeding. Tonic herbs can be used in combination formulations for weeks and months to bring results. Life root, also known as ragwort, has been used as a female regulator in herbal medicine for conditions such as menstrual cramps, menorrhagia, and suppressed menstruation.<sup>32p10</sup>

The root of the blue cohosh, a perennial herb that grows all over the United States, when used with other astringent herbs acts as a uterine tonic and helps regulate the menses and the amount of flow.<sup>32p10</sup>

#### *Traditional herbs for blood loss*

Yarrow has been used since medieval times to treat bleeding wounds. It is a herb traditionally known as a uterine stimulant. It increases muscular tone and stimulates re-

productive activity, and is also known to be effective for the treatment of menstrual problems. There is some scientific evidence based on research performed in Europe to support its effectiveness. A potential side effect is miscarriage in pregnant women.<sup>34p294,35p18</sup> Laboratory studies have indicated that black haw has an antispasmodic and relaxant effect on the uterus.<sup>32p187</sup>

Various Chinese formulas that may help to control menorrhagia include: *Tripterygium wilfordii* Hook f. (TWH-f),<sup>47</sup> *Xiao Yao San* – modified, also known as *Rambling Powder*,<sup>48,49p272,50p272</sup> and *Dong-quai* or *Dang Gui*.

*Dong-quai* is used in Chinese medicine for the treatment of multiple gynecological conditions.<sup>32p158,34p28,35p246,39p224,42p99-100,43p141,45p540,49p241,51p474,52p290</sup> Its exact mechanism of action is unclear but it has been proven to have vasodilatation and antispasmodic properties, however, it can cause uterine contractions in pregnant women.<sup>34p29,35p21</sup> One study from China in 1984 discussed the use of *Tripterygium wilfordii* Hook, and its effects on menorrhagia. Of 12 total women, 7 developed amenorrhea within 3–6 months, 4 had a reduction in menses, and 1 showed no change at all. The herb is thought to exert an inhibitory effect on ovarian function.<sup>47</sup> *Wedelia calendulacea* Less, a perennial herb, contains as its principal constituent isoflavanoids and wedelolactone, which are analogous in structure to the clover estrogen coumestrol. In addition to its use with menorrhagia, it can be used for uterine hemorrhage.<sup>53</sup>

Other herbs that have been mentioned as helpful for menorrhagia are: *Bayberry Bark* (*myrica cerifera*), also known as *Wax myrtle*<sup>46p23</sup> and *Black cohosh* (*cimicifuga racemosa* or *actaea racemosa* or *actea macrotyis*)<sup>16,32p157,33p243-244,35p246,37,39p31,42p83-84,43p51,54p5,55,56</sup> See Table 7 for a list of herbs suggested helpful for menorrhagia and their classification.

#### *Sample treatment plan*

Tori Hudson, N.D. has two suggested sample treatment plans, one for chronic menorrhagia and one for semi-acute menorrhagia that may be of use in designing a treatment plan that includes supplements.<sup>32p11</sup> See Table 8 for sample plans.

#### *Diet and nutritional supplements*

Diet can play an important role in any well-rounded ther-

Table 7 Herbs and Their Classification

	<i>Astringent Herbs with Tannins</i>	<i>Astringent Herbs without Tannins</i>	<i>Uterine Tonics</i>	<i>Traditional Herbs for blood loss</i>
Beth root* <sup>16,32p9</sup>	X			X
Black haw <sup>32p187</sup>				X
Blue cohosh (caulophyllum thalictroides) or squaw root to papoose root. <sup>16,32p10,39p31,42p84-85</sup>			X	
Canadian fleabane * (eregeron canadensis) <sup>16,32p10</sup>				X
Cinnamon * or Cinnamon essential oil* <sup>16,32p10</sup>				X
Cranesbill (geranium maculatum) or Crowfoot <sup>16,32p9</sup>	X			
Goldenseal (hydrastis canadensis)‡ <sup>16,32p9, 34p50-51,42p126,43p195-197</sup>		X		
Greater periwinkle (vinca major) <sup>16,32p10</sup>	X			X
Helonias (chamaelirium luteum) <sup>16,32p10, 42p139</sup>			X	
Horsetail (equisetum arvense)† <sup>16,32p9, 42p148-149,43p219-220</sup>		X		
Ladies mantle (alchemilla vulgaris) <sup>16,32p9, 41p52-53</sup>	X			
Life root (senecio aureus) <sup>16,32p10,42p174-175</sup>			X	X
Raspberry leaves (rubus idaeus) <sup>16,32p10, 42p240-241</sup>			X	
Savin (sabina officinalis) <sup>16,32p10</sup>				X
Shepard's purse (capsella bursa pastoris) <sup>16,33p239, 37,39p62,40,41p112-114, 44p200-203,45p496-497</sup>		X		X
Squaw vine (mitchella repens) <sup>16,32p10</sup>			X	
Yarrow (achilla millefolium) <sup>16,32p9-10, 33p245,41p342-344,42 p293-294,46p376-378</sup>	X			X

\*"The herbs that are starred [\*] may be toxic if given in an inappropriate dosage, so correct dosing is very important."<sup>32p10</sup>  
†Tyler's *Honest Herbal* says the plant is little more than a weak diuretic, and *Healing Herbs* says this plant is slightly dangerous in toxicity, particularly to children.  
‡This plant is on the endangered species list according to *Tyler's Honest Herbal*.

Table 8 *Sample Treatment Plans*

<i>Sample Treatment Plan for Chronic Recurring Menorrhagia</i>
<ul style="list-style-type: none"> <li>• Bioflavonoids, 1000 mg twice per day</li> <li>• Vitamin A 60,000IU per day</li> <li>• Chaste tree (standardized extract) 175 mg per day; or ½–1 tsp daily</li> <li>• Combination herbal product using astringents and uterine tonics</li> <li>• Consider natural progesterone cream, ¼ to ½ tsp, 12–21 days/month</li> </ul>
<i>Sample Treatment Plan for Semi-Acute Menorrhagia</i>
<ul style="list-style-type: none"> <li>• Bioflavonoids, 1000 mg twice per day</li> <li>• Oral micronized progesterone: 200–300 mg per day for 7–12 days followed by a cyclic hormone product for 21 days on and 7 days off</li> <li>• Combination herbal product using astringents and uterine tonics, 20–30 drops every 2–3 hours <ul style="list-style-type: none"> <li>– Yarrow</li> <li>– Greater periwinkle</li> <li>– Shepherd’s purse</li> <li>– Life Root</li> </ul> </li> </ul>

apeutic approach to menorrhagia. The diet should be low in animal fat and high in fish oils and linolenic and linoleic acids (vegetable oil sources).<sup>16</sup> Two foods that have been repeatedly mentioned in their ability to regulate the menstrual cycle are flaxseeds and soy protein.<sup>16,32p36,38p218,39p179,52p451–452,56,57</sup>

### *Iron*

One of the major causes of iron-deficiency anemia is blood loss, but it is less well-known that chronic iron deficiency can also be a cause of menorrhagia.<sup>16,32p5–6,38p152</sup> Foods high in iron in particular should be incorporated into the general diet, especially when heavy blood loss persists on a monthly basis.<sup>16,32p5,37,38p79,44p207</sup> Brewer’s yeast and wheat germ are both excellent sources of iron. One of the richest sources of iron and other minerals is blackstrap molasses. In addition, organic liver and kidneys are probably the highest single source of iron, but

make sure it is organic if at all possible, due to the build-up of metabolic waste in these organs. Apricots, eggs, ground beef, raisins, beans, cooked spinach, and chicken are also high in iron. Yogurt, sour fruits, and citrus juices can aid in the absorption of iron.<sup>32p6</sup>

### *Vitamin A*

A deficiency of vitamin A may be a contributing factor in the menorrhagia<sup>36</sup> of adult women, and most vitamin A serum levels in women with menorrhagia are found to be lower than in healthy women.<sup>38p153</sup> In one study where this was found to be the case, vitamin A was used to treat 40 women with menorrhagia due to various causes. In the group who received 60,000IU of vitamin A for 35 days, menstruation returned to normal in 23 patients (57.5%) and was reduced in 14 (35%). Only 3 of the 40 women (7.5%) had ineffective results, so approximately (92.5%) of women were shown to have some relief.<sup>16,32p6</sup>

### *Vitamin B Complex*

There may be a correlation between a deficiency of vitamin B and menorrhagia.<sup>16,32p7,36p6,38p154,58</sup> With Vitamin B complex deficiencies, the liver loses its ability to inactivate estrogen. Some cases of menorrhagia are due to excess estrogen’s effect on the endometrium. The vitamin B complex may help to normalize estrogen metabolism.<sup>16,32p7</sup>

### *Vitamin C and Bioflavonoids*

Vitamin C, along with bioflavonoids, help reduce heavy bleeding<sup>32p8,36,37,38p153,39p62</sup> by making the capillaries stronger and preventing them from becoming fragile. In one small study with 18 women who had heavy menstrual bleeding, bleeding improved in 16 out of the 18 patients when the women took Vitamin C and bioflavonoids.<sup>16,32p8,37</sup> In addition, vitamin C can also help women who have suffered from iron deficiency from menorrhagia by increasing iron absorbency.

### *Vitamin K and chlorophyll*

“Although bleeding time and prothrombin levels in women with menorrhagia are typically normal, the use of vitamin K (historically in the form of crude preparations of chlorophyll) has clinical and limited research support.”<sup>16</sup>

### *Natural hormones*

Another fairly recent development in the management of

not only menorrhagia, but other menopausal symptoms is the growing interest in natural or bioidentical hormones. Although there is little research at this time, preliminary studies show they offer an alternative that appears to be safer and relatively free from side effects.<sup>38p4</sup> Photoestrogens and natural progesterone from plant phytosterols made available as creams, lozenges, capsules, oils, DHEA, melatonin or pregnenolone are suggested as aids in menopausal symptoms including menorrhagia. They are stronger than the botanicals, yet weaker than traditional medicines.<sup>39p28</sup>

### Acupuncture

Conventional health professionals who practice acupuncture find points or “trigger points” that correspond to physiological and anatomical features such as peripheral nerve junctions.<sup>59,60</sup> Acupuncture points are believed to stimulate the central nervous system to release chemicals into the muscles, spinal cord, and brain. This in turn influences the body to release other chemicals such as hormones that influence the body’s self-regulating systems.<sup>61</sup> The most common complaints found in a survey of acupuncture practices include back pain, arthritis, fatigue, and menstrual disorders.<sup>59</sup> Research from China also suggests that acupuncture is effective in the treatment of menorrhagia. Liu reported that of 30 uterine bleeding cases treated, bleeding stopped within 7 days in 24 or 80% of the cases and within 10 days in 4 or 13.3% of the cases, resulting in a “total effective rate” of 90%.<sup>62</sup> In a second study by Zhang, of 50 cases, the follow-up results showed that 43 or 86% were cured, 5 cases or 10% showed markedly effective results and 2 cases or 4% showed effective results.<sup>63</sup> A U.S. survey of patients visiting acupuncturists, 17.4% had received care for gynecological conditions, of these 92% had reported that their symptoms had either disappeared or improved.<sup>64</sup>

### Chiropractic management

A review of the anatomy reveals that in addition to hormonal influences, the ovary and uterus are controlled by sympathetic and parasympathetic nerve fibers. The ovary is innervated by sympathetic fibers derived from the 10th and 11th thoracic spinal segment and the parasympathetic fibers are from the inferior hypogastric plexus, thus providing the appropriate vasoconstriction and vasodilatation to the ovary.<sup>65p1323</sup> The sympathetic supply to the

uterus is derived from the 12th thoracic and 1st lumbar spinal segments. Parasympathetic fibers arise from the 2nd and 4th sacral spinal segments that relay into the paracervical ganglia. Sympathetic activity may produce uterine contracture and vasoconstriction. Parasympathetic activity may produce uterine inhibition and vasodilatation. However, these activities are also influenced by hormones.<sup>65p1334</sup> There are few papers directly addressing chiropractic care of menstrual problem. A review of the literature found only several case reports and 1 very small research study.

A 1991 *JMPT* article discussed a case report about a patient who had heavy bleeding for 3 months, who experienced reduction in bleeding after 1 spinal adjustment to 12th thoracic, 1st and 4th lumbar, and 1st sacral spinal segments and closed reduction distractive decompression. There was complete cessation of bleeding following a 2nd adjustment that utilized the same procedures.<sup>66</sup> In 2 other related studies by Walsh and Polus, there has been some suggestion that women with premenstrual syndrome had symptoms reduced with spinal manipulation and soft-tissue therapy.<sup>67,68</sup> These authors have called for further research on the effect of spinal manipulation on these conditions. In addition, data from numerous case studies and preliminary research studies have provided some evidence that chiropractic care may have a positive effect on female reproductive disorders, primarily dysmenorrhea and chronic pelvic pain.<sup>5p116</sup>

Two case studies from *JMPT* did find varied pelvic symptoms, such as excessive menstruation, irregular menstruation, and decreased genital sensitivity responded favorably. Upon chiropractic examination, these patients were found to have lower sacral nerve root compression secondary to mechanical disorder of the low back and were treated with closed reduction distractive decompression adjustments.<sup>69–71</sup> Browning (October 1989) related that typically the 4th and 5th lumbar and 1st sacral sciatic nerve root syndromes contribute to the production of pelvic pain and organic dysfunctions such as vaginal discharge, painful and irregular menstruation, and decreased sexual activity. Areas of somatic pain with palpation indicating 2nd sacral nerve root compression include the ipsilateral inguinal, central gluteal, medial popliteal, and posteromedial leg regions. Third sacral nerve root compression produced pain on palpation at the ipsilateral medial gluteal or para-anal area and symphysis pubis.

Another sign that helps identify an individual with pelvic disorders secondary to lower sacral nerve root compression is the production or aggravation of inguinal or suprapubic pain on straight leg raise, most often occurring at high angle.<sup>70</sup> Browning (August 1989) used 6 volunteers treated with flexion distractive decompression manipulation of the lumbar spine and reported that of the 2 subjects with excessive menstruation, 1 had no change, and 1 reported worsened symptoms. Browning felt this may have been due to the absence of adequate parasympathetic tone secondary to lower sacral nerve root compression.<sup>72</sup> The small number of chiropractic studies available does not allow us to reach any conclusion about the effects of chiropractic care on menorrhagia symptoms. Further chiropractic clinical studies on the effect of spinal manipulation on menorrhagia are needed.

### Conclusion

We believe the chiropractor can serve a vital role in patient care and education in menorrhagia cases. There is a plethora of information on menorrhagia, some of it contradictory and confusing.<sup>9</sup> With proper knowledge, we can help our patients navigate through this sea of information in order to make sound decisions on any type of care offered.

### Author contribution statement

ABLF conceived the idea of menorrhagia management review. ABLF, PJH, and SMLT contributed to the design and planning of the research. All authors were involved in data collection and review. ABLF wrote the first draft of the manuscript. All authors edited and approved the final version of the manuscript.

### Conflict of interest statement

None of the authors have any financial interest in the publication of this paper and there are no other competing interests associated with this paper and its publication.

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