

**AFRICAN WOMEN EXPERIENCING PERIMENOPAUSE:  
INSOMNIA AND DRY EYES**

**By**

**Dr. Brenda Nelson-Porter**

**A Paper Presented in Partial Fulfillment  
of the Requirements for the International PhD**

**World Information Distributed University (WIDU)**

**January 2014**

**Updated September 2017**

## **African Women Experiencing Perimenopause: Insomnia and Dry Eyes**

This paper focuses on women in the poorer nations, such as in Africa, who experience perimenopause and are coping with symptoms associated with perimenopause. Insomnia and dry eyes are symptoms associated with perimenopause, a condition that involves changes in the hormones impacting women between the ages of 20-45 (“American Society for Reproductive Medicine,” 2008; “Perimenopause Symptoms,” n.d.). The association of insomnia and its association with dry eyes experienced by African women will be further discussed and natural approaches aimed to help women who experience these symptoms will be presented.

### **Conditions and Causes of Insomnia**

Researchers found consistency result among Africa women who have trouble sleeping (Breus, 2012). Insomnia can be described as sleep disturbance (Ensrud et al., 2009). Sleep disturbance include difficulties going to sleep, remaining asleep, having a sound sleep pattern, or wakening (Ensrud et al., 2009).

In regards to African woman who experience insomnia, researchers link sleep problem to social demographics, physical health, quality of life, and age (Stranges, 2012; Abstract section). Studies have shown prevalence of sleep problems in mostly rural areas with women with lower education, who have anxiety and depression issues, and who live without a partner (Breus, 2012). Sleep disturbance has been associated with women who experience hot flashes and night sweats (Ensrud et al., 2009).

Insomnia caused by hormonal imbalance or change in estrogen or progesterone levels should not be confused with hypersomnia (Balch, Stengler, Balch, 2011). African sleeping sickness, known as human Africa trypanosomiasis, is a disease that is caused by parasite called trypanosome brucei that have been known to result in hypersomnia (excessive daytime sleeplessness), blindness, and death if the disease goes untreated (Stich, Abel, & Krishna, 2002).

“Africa is home to 19% of the world’s blind, yet only 11% of the world’s population” (SEVA, Foundation, 2012). The disease derives from a bite from tsetse flies or wild animals whereby the infection transmits through the blood stream impacting the central nerve system (e.g., CNS; Dauvilliers & Buguet, 2005; Stich et al., 2008). Other researchers have found “sleeping sickness is not a hypersomnia per se, but rather a major disorder of sleep structure and its circadian regulation (Dauvilliers & Buguet, 2005).

Experiencing insomnia may cause dry eyes or ocular dryness, which is another symptom of perimenopause (McDonald & Giblin, n.d.). Menopause, thus, may lead to eye diseases, dilemmas, and problems with visual and tearing (i.e., xerophthalmia; McDonald & Giblin, n.d). A web survey about dry eye symptoms was conducted whereby 582 menopause and perimenopausal women participated (McDonald & Giblin, n.d). Of 94% of the women who claimed to have some dry eye symptom, 27% was never diagnosed with dry eye by a healthcare professional (McDonald & Giblin, n.d). Very small percent of women discuss experiencing dry eye with their physicians or gynecologist because most women never associated dry eye with menopause (McDonald & Giblin, n.d).

### **Experiences of Women in Developing Countries**

- A female from Nigeria shared, Typically, Africans are a very superstitious people; many of this population are uneducated and would approach any condition with trepidation! The first instinct would be that “an enemy has placed a cursed on them” They would then seek “spiritual healing” before finally going to seek medical treatment. (N. Kelley, email communication, January 20, 2014)

- A male from Chennai, Tamil Nadu (India) shared, for insomnia and headaches, normally, older women take a juice of ginger with coriander leaves (S. Balasekar, social media communication, January 20, 2014).

### **Suggestions to Approach Insomnia and Dry Eyes**

The following suggestions aim to help women, to include women in Africa or other nations, who experience insomnia and dry eyes associated with perimenopause and are not aimed to diagnose, prescribe, treat, or cure. Natural techniques discussed in this paper aim to enlighten women on lifestyles and healthy living. Women who believe their condition results from a medical disease are recommended to seek assistance from an MD and naturopathic doctor (ND).

Aromatherapy, which involves using clary sage, ylang ylang, and lavender, has been used to help with insomnia (Freedenberg, 2009). Although pentamidine, suramin, melarsoprol, eflornithine, and chemotherapy have been effective in treating African sleeping sickness, research is limited on natural remedies or food intakes of women in Africa to approach hypersomnia or a major disorder of sleep structure (Dauvilliers & Buguet, 2005; Steverding, 2010; Stich et al., 2008). Melatonin, a hormone found in plants (tomato, banana, cucumber, and beetroot) and in the human brain, has been deemed to regulate sleep and awake cycles, however, has not proven effective in treating sleep disorders (Balch et al., 2011; Cajochen, Krauchi & Wirz-Justice, 2003, Kolar & Machackova, 2005).

When insomnia is said to result in experiencing dry eyes, visiting an iridologist to determine an underling cause may be an effective approach. Iridology practitioners believe conditions of the body (physiological functions and energetic behaviors) are presented by the color area and structure of the eye called the iris (Jackson-Main, 2004; Koch, 2007). For example, individuals with a high-resistance iris, which has a strong constitutional (density)

structure, find relaxing difficult (Jackson-Main, 2004). Iridology practitioners assist clients with dietary intakes, to include vitamins, minerals, and herbs (Jackson-Main, 2004; Koch, 2007).

Although estrogen and progesterone therapy may reduce sleep disturbances, some vitamins have been found to help eye functions and prevent eye disease (Foundation of the American Academy of Ophthalmology [FAAO], 2011; Kravitz & Joffe, 2011).

Although a low deficiency of vitamin A result in dry eyes, difficulties seeing at night, or blindness, low deficiencies in Vitamins B<sub>6</sub> and B<sub>12</sub> has been reported to contribute to insomnia or sleep disturbance (Lemp et al., 2007; Sarrafi-Zadeh et al., 2012; Singh & Sachan, 2011).

Vitamin A has been reported to be stored in fat derived from liver, eggs, and milk nourishes the cornea (FAAO, 2011). Healthcare practitioners, thus, may test of Vitamin B level of clients who are experiencing insomnia and dry eyes. Vitamins B<sub>6</sub>, B<sub>12</sub>, and B-complex, which are stored either in rice milk, whole grain or fortified cereals, sorghum, or oranges, have been reported to nourish the nervous system and improve the sleep-wake rhythm (Balch et al., 2011; Harvard, 2014; Sarrafi-Zadeh et al., 2012; Singh & Sachan, 2011; Worldwatch Institute, 2011).

Vitamin C, which is stored in water but mostly found in vegetable and fruit, such as oranges, grapefruits, strawberries, baobab's fruit, garden eggs, green peppers, and tomatoes, help prevent eye disease (FAAO, 2011; Worldwatch Institute, 2011). Papayas, produced in Central and South Africa, contain Vitamins A, B, C, and E (FAAO, 2011; Harvard, 2014; Teixeira da Silva, 2007). Yams, a popular food source grown in West Africa, contain Vitamins A and C (O'Sullivan, 2010).

Vitamin E aids in the prevention of cataracts and age-related macular degeneration (FAAO, 2011). This vitamin is also stored in fat derived from pecans, almonds, corn and vegetable oils, and wheat germ (FAAO, 2011). The International Center for Agricultural

Research in the Dry Areas (ICARDA) headquartered Lebanon and the International Maize and Wheat Improvement Center (CIMMYT) headquartered in Mexico contribute to developing wheat in underdeveloped countries (M'mboyi, Njau, Olembo, Kinyua, & Malinga, 2010).

Minerals and carotenoids also contribute to approaching insomnia and maintaining healthy eyes. "Oral supplementation of bivalent iron is effective together with vitamin C to increase absorption of iron from the gut" (Sarraf-Zade et al., 2012, p. 7). Studies have shown that iron, calcium, and magnesium deficiencies are related to sleep disturbance (Sarraf-Zade et al., 2012).

Zinc, a trace mineral, helps metabolize vitamin A stored in the liver to the retina (FAAO, 2011). Zinc is found in beef, lamb or mutton, pork, goats, shellfish, peanuts, and whole grain (Casey, 1992; FAAO, 2011). Research shows water buffalos, such as the disease free water buffalos in South Africa, provide low zinc and Vitamin B<sub>12</sub>, although higher B<sub>6</sub> intakes (Robson, 2010).

Lutein and zeaxanthin are carotenoids, which metabolize into vitamin A. These carotenoids are naturally found in the eyes used as a defense against ultra violet light to help convert sunlight into nutrients better known as vitamins and have been reported to be in the natural coloring found in plants or deep yellow and green foods, such as spinach, broccoli, and corn (FAAO, 2011). Although research has suggested that African spinach, an amaranthus species, is high in Vitamin A (e.g., beta carotene), Vitamin A is in fact made in the body (FAAO, 2011; O'Brien & Price, 2008). The amaranthus grain, however, is also said to be high in amino acid lysine, which are stored in cereals, such as maize, wheat, and rice (O'Brien & Price, 2008). Individuals taking medications may consider consulting a doctor prior to taking supplements, as supplements may cause harmful side effects when taken with medications (Nihira, 2012).

## References

- American Society for Reproductive Medicine. (2008). Current evolution of amenorrhea. *Fertility and Sterility*, 90(3), S219-S225. Retrieved from [http://www.asrm.org/globalassets/asrm/asrm-content/news-and-publications/practice-guidelines/for-non-members/current\\_evaluation\\_of\\_amenorrhea-pdfnoprnt.pdf](http://www.asrm.org/globalassets/asrm/asrm-content/news-and-publications/practice-guidelines/for-non-members/current_evaluation_of_amenorrhea-pdfnoprnt.pdf)
- Balch J. F., Stengler, M., & Balch, R. Y. (2011). *Prescription for natural cures: A self-care guide for treating health problems with natural remedies including diet, nutrition, supplements, and other holistic methods* (Revised ed.). Hoboken, NJ: Wiley.
- Breus, M. (2012). *Sleep well*. Retrieved from <http://blogs.webmd.com/sleep-disorders/2012/08/are-sleep-problems-the-next-global-health-crisis.html>
- Cajochen, C., Krauchi, K., & Wirz-Justice, A. (2003). Role of melatonin in the regulation of human circadian rhythms and sleep. *Journal of Neuroendocrinology*, 15, 432-437. Retrieved from [http://www.chronobiology.ch/wp-content/uploads/publications/2003\\_09.pdf](http://www.chronobiology.ch/wp-content/uploads/publications/2003_09.pdf)
- Casey, N. H. (1992). *Goat meat in human nutrition*. Retrieved from <http://www.nda.agric.za/docs/AAPS/Articles/Goats/Production/Goat%20meat.pdf>
- Dauvilliers, Y., & Buguet, A. (2005). Hypersomnia. *Dialogues in Clinical Neuroscience*, 7(4), 347-356. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3181743/>
- Ensrud, K. E., Stone, K. L., Blackwell, T. L., Sawaya, G. F., Tagliaferri, M., Diem, S. J., & Grady, D. (2009). Frequency and severity of hot flashes and sleep disturbance in postmenopausal women with hot flashes. *Menopause*, 16(2), 286-292.
- Foundation of the American Academy of Ophthalmology (FAAO). (2011). *Healthy eyes, healthy body*. Retrieved from [http://www.museumofvision.org/dynamic/files/uploaded\\_files\\_filename\\_75.pdf](http://www.museumofvision.org/dynamic/files/uploaded_files_filename_75.pdf)
- Freedenberg, R. (2009). Naturopathic/holistic treatment of mild to moderate depression. *Natural Medicine Journal*, 1(4), 1-6. Retrieved from [http://naturalmedicinejournal.net/pdf/nmj\\_dec09\\_tp.pdf](http://naturalmedicinejournal.net/pdf/nmj_dec09_tp.pdf)
- Harvard. (2014). Three of the B Vitamins: Folate, Vitamin B<sub>6</sub>, and Vitamin B<sub>12</sub>. *The Nutrition Source*. Retrieved from <http://www.hsph.harvard.edu/nutritionsource/vitamin-b/>
- Jackson-Main, P. (2004). *Practical iridology: Using your eyes to pinpoint your health risks and your particular path to wellbeing*. London: Carroll & Brown.
- Koch, A. M. (2007, June). The healing space: Iridology 'sees' health patterns. *The Taos News*, B.6.

- Kolar, J., & Machackova, I. (2005). Melatonin in higher plants: Occurrence and possible functions. *Journal of Pineal Research*, 39, 333-341. doi:10.1111/j.1600-079X.2005.00276.x
- Kravitz, H. M., & Joffe, H. (2011). Sleep during the perimenopause: A SWAN story. *Obstetrics & Gynecology Clinics of North America*, 38(3), 567-586. doi:10.1016/j.ogc.2011.06.002
- Lemp, M. A., Baudouin, C., Baum, J., Dogru, M., Foulks, G. N., Kinoshita, S., Laibson, P., McCulley, J., Murube, J., Pflugfelder, S. C., Rolando, M., & Toda, I. (2007). The definition and classification of dry eye disease: Report of the Definition and Classification Subcommittee of the International Dry Eye Work Shop. *The Ocular surface*, 5(2), 75-92.
- M'mboyi, F., Njau, P., Olembo, N., Kinyua M., & Malinga, J. (2010). *Application of biotechnology to wheat improvement in Sub-Saharan Africa: The case of Kenya*. Kenya: African Biotechnology Stakeholders Forum. Retrieved from <http://www.absafrica.org/downloads/Wheat%20Book%20Series.pdf>
- McDonald, M. B., & Giblin, K. (n.d.). *Two perspective on perimenopause and dry eye*. Retrieved from [http://www.redhotmamas.org/pdf/menopause\\_dry\\_eye.pdf](http://www.redhotmamas.org/pdf/menopause_dry_eye.pdf)
- Nihira, M. A. (2012). *Menopause and hot flashes*. Retrieved from <http://www.webmd.com/menopause/guide/hot-flashes?page=1>
- O'Brien, G. K. & Price, M. L. (2008). *Amaranth grain & vegetable types*. Retrieved from [https://c.ymcdn.com/sites/www.echocommunity.org/resource/collection/E66CDFDB-0A0D-4DDE-8AB1-74D9D8C3EDD4/Amaranth\\_Grain\\_&\\_Vegetable\\_Types\\_\[Office\\_Format\].pdf](https://c.ymcdn.com/sites/www.echocommunity.org/resource/collection/E66CDFDB-0A0D-4DDE-8AB1-74D9D8C3EDD4/Amaranth_Grain_&_Vegetable_Types_[Office_Format].pdf)
- O'Sullivan, J. N. (2010). *Yam nutrition: Nutrient disorder and soil fertility management*. Australia: Australian Centre for International Agricultural Research (ACIAR). Available at <http://aciarc.gov.au/>
- Perimenopause symptoms*. (n.d.). Retrieved from <http://www.perimenopausesymptoms.org/>
- Robson, (2010, July). *Creating convenience food based on human nutritional requirements*. Retrieved from [http://hal.inria.fr/docs/00/78/40/27/PDF/2010\\_Creating\\_Convenience\\_Food.pdf](http://hal.inria.fr/docs/00/78/40/27/PDF/2010_Creating_Convenience_Food.pdf)
- Sarrafi-Zadeh, S., Dharwadkar, S., Singh, R. B., De Meester, F., Wilczynska, A., Wilson, D. W., & Begum, K. (2010). Nutritional modulators of sleep disorders. *The Open Nutraceuticals Journal*, 5, 1-14. Retrieved from <http://benthamscience.com/open/tonutraj/articles/V005/1TONUTRAJ.pdf>

- SEVA Foundation. (2012, August). *Seva Eye Care Programs: Africa: Strengthening local capacity to confront avoidable blindness*. Retrieved from [http://www.seva.org/site/DocServer/Seva\\_Africa\\_Sight\\_Program\\_Profile.pdf?docID=1801](http://www.seva.org/site/DocServer/Seva_Africa_Sight_Program_Profile.pdf?docID=1801)
- Singh, V. P., & Sachan, N. (2011). Vitamin B<sub>12</sub>- A vital vitamin for human health: A review. *American Journal of Food and Technology*, 6(10), 857-863. doi:10.3923/ajft.2011.857.863
- Steverding, D. (2010). The development of drugs for treatment of sleeping sickness: A historical review. *Parasites & Vectors*, 3, 15. doi:10.1186/1756-3305-3-15
- Stranges, S., Tigbe, W., Gómez-Olivé, F. X., Thorogood, M., Kandala, N-B. (2012). Sleep problems: An emerging global epidemic? Findings from the InDepth Who-Sage study among more than 40,000 older adults from 8 countries Across Africa and Asia. *Sleep*, 35(8), 1173-1181. <http://dx.doi.org/10.5665/sleep.2012>
- Stich, A., Abel, P. M., Krishna, S. (2002). Human African trypanosomiasis. *British Medical Journal*, 325(7357), 203-206.
- Teixeira da Silva, J. A. Rashid, Z., Nhu, D. T., Sivakumar, D., Gera, A., Souza, M. T., & Tennant, P. F. (2007). Papaya (*Carica papaya* L.) biology and biotechnology. *Tree and Forestry Science and Biotechnology*, 47-73.
- Worldwatch Institute. (2011). *Africa's indigenous crops*. Retrieved from <http://www.worldwatch.org/system/files/NtP-Africa's-Indigenous-Crops.pdf>