



Rooby

Scientific Researches

Flaxseeds

Flaxseed is known for its health and beauty benefits. The nutrients found in flaxseed include healthy fats, lignans, fiber, antioxidants and other valuable vitamins and minerals.

Lignans:

- **Reduce breast pain**

Jaafarnejad, F., Adibmoghaddam, E., Emami, S. A., & Saki, A. (2017). Compare the effect of flaxseed, evening primrose oil and Vitamin E on duration of periodic breast pain. *Journal of education and health promotion*, 6, 85. https://doi.org/10.4103/jehp.jehp_83_16

Mirghafourvand, M., Mohammad-Alizadeh-Charandabi, S., Ahmadpour, P., & Javadzadeh, Y. (2016). Effects of Vitex agnus and Flaxseed on cyclic mastalgia: A randomized controlled trial. *Complementary therapies in medicine*, 24, 90-95.

- **Detoxify the body of excess hormones**

Adlercreutz, H., Höckerstedt, K., Bannwart, C., Bloigu, S., Hämäläinen, E., Fotsis, T., & Ollus, A. (1987). Effect of dietary components, including lignans and phytoestrogens, on enterohepatic circulation and liver metabolism of estrogens and on sex hormone binding globulin (SHBG). *Journal of steroid biochemistry*, 27(4-6), 1135-1144.

- **Reduce polycystic ovarian syndrome**

Nowak, D. A., Snyder, D. C., Brown, A. J., & Demark-Wahnefried, W. (2007). The effect of flaxseed supplementation on hormonal levels associated with polycystic ovarian syndrome: A case study. *Current topics in nutraceutical research*, 5(4), 177-181.

Farzana, F., Sulaiman, A., Ruckmani, A., Vijayalakshmi, K., Karunya Lakshmi, G., & Shri Ranjini, S. (2015). Effects of flax seeds supplementation in polycystic ovarian syndrome. *Int J Pharm Sci Rev Res*, 31(1), 113-119.

- **Reduce risk of breast cancer**

Mason, J. K., & Thompson, L. U. (2014). Flaxseed and its lignan and oil components: can they play a role in reducing the risk of and improving the treatment of breast cancer?. *Applied physiology, nutrition, and metabolism = Physiologie appliquee, nutrition et metabolisme*, 39(6), 663-678. <https://doi.org/10.1139/apnm-2013-0420>

Lowcock, E. C., Cotterchio, M., & Boucher, B. A. (2013). Consumption of flaxseed, a rich source of lignans, is associated with reduced breast cancer risk. *Cancer causes & control : CCC*, 24(4), 813-816. <https://doi.org/10.1007/s10552-013-0155-7>

- **Prevent acne by balancing androgen levels**

Nowak, D. A., Snyder, D. C., Brown, A. J., & Demark-Wahnefried, W. (2007). The effect of flaxseed supplementation on hormonal levels associated with polycystic ovarian syndrome: A case study. *Current topics in nutraceutical research*, 5(4), 177.

- **Decrease oxidative stress and inflammation**

Adolphe, J. L., Whiting, S. J., Juurlink, B. H., Thorpe, L. U., & Alcorn, J. (2010). Health effects with consumption of the flax lignan secoisolariciresinol diglucoside. *The British journal of nutrition*, 103(7), 929–938. <https://doi.org/10.1017/S0007114509992753>

Magnesium:

- **Reduces menstrual migraines**

Facchinetti, F., Sances, G., Borella, P., Genazzani, A. R., & Nappi, G. (1991). Magnesium prophylaxis of menstrual migraine: effects on intracellular magnesium. *Headache: The Journal of Head and Face Pain*, 31(5), 298-301.

Allais, G., Gabellari, I. C., Burzio, C., Rolando, S., De Lorenzo, C., Mana, O., & Benedetto, C. (2012). Premenstrual syndrome and migraine. *Neurological Sciences*, 33(1), 111-115.

- **Reduces premenstrual syndrome**

Fathizadeh, N., Ebrahimi, E., Valiani, M., Tavakoli, N., & Yar, M. H. (2010). Evaluating the effect of magnesium and magnesium plus vitamin B6 supplement on the severity of premenstrual syndrome. *Iranian Journal of Nursing and Midwifery Research*, 15(Suppl1), 401.

London, R. S., Bradley, L., & Chiamori, N. Y. (1991). Effect of a nutritional supplement on premenstrual symptomatology in women with premenstrual syndrome: a double-blind longitudinal study. *Journal of the American College of Nutrition*, 10(5), 494-499.

Quaranta, S., Buscaglia, M. A., Meroni, M. G., Colombo, E., & Cella, S. (2007). Pilot study of the efficacy and safety of a modified-release magnesium 250mg tablet (Sincromag®) for the treatment of premenstrual syndrome. *Clinical drug investigation*, 27(1), 51-58.

De Souza, M. C., Walker, A. F., Robinson, P. A., & Bolland, K. (2000). A synergistic effect of a daily supplement for 1 month of 200 mg magnesium plus 50 mg vitamin B6 for the relief of anxiety-related premenstrual symptoms: a randomized, double-blind, crossover study. *Journal of women's health & gender-based medicine*, 9(2), 131-139.

Bendich, A. (2000). The potential for dietary supplements to reduce premenstrual syndrome (PMS) symptoms. *Journal of the American college of nutrition*, 19(1), 3-12.

- **Relieves premenstrual mood changes**

Facchinetti, F., Borella, P., Sances, G., Fioroni, L., Nappi, R. E., & Genazzani, A. R. (1991). Oral magnesium successfully relieves premenstrual mood changes. *Obstetrics and gynecology*, 78(2), 177–181.

- **Reduces premenstrual water retention**

Walker, A. F., De Souza, M. C., Vickers, M. F., Abeyasekera, S., Collins, M. L., & Trinca, L. A. (1998). Magnesium supplementation alleviates premenstrual symptoms of fluid retention. *Journal of women's health*, 7(9), 1157–1165. <https://doi.org/10.1089/jwh.1998.7.1157>

- **Improves sleep**

Chollet, D., Franken, P., Raffin, Y., Henrotte, J. G., Widmer, J., Malafosse, A., & Tafti, M. (2001). Magnesium involvement in sleep: genetic and nutritional models. *Behavior genetics*, 31(5), 413–425. <https://doi.org/10.1023/a:1012790321071>

Held, K., Antonijevic, I. A., Künzel, H., Uhr, M., Wetter, T. C., Golly, I. C., Steiger, A., & Murck, H. (2002). Oral Mg(2+) supplementation reverses age-related neuroendocrine and sleep EEG changes in humans. *Pharmacopsychiatry*, 35(4), 135–143. <https://doi.org/10.1055/s-2002-33195>

- **Lowers risk of developing diabetes**

Lopez-Ridaura, R., Willett, W. C., Rimm, E. B., Liu, S., Stampfer, M. J., Manson, J. E., & Hu, F. B. (2004). Magnesium intake and risk of type 2 diabetes in men and women. *Diabetes care*, 27(1), 134–140. <https://doi.org/10.2337/diacare.27.1.134>

Larsson, S. C., & Wolk, A. (2007). Magnesium intake and risk of type 2 diabetes: a meta-analysis. *Journal of internal medicine*, 262(2), 208–214. <https://doi.org/10.1111/j.1365-2796.2007.01840.x>

Rodríguez-Morán, M., Simental Mendía, L. E., Zambrano Galván, G., & Guerrero-Romero, F. (2011). The role of magnesium in type 2 diabetes: a brief based-clinical review. *Magnesium research*, 24(4), 156–162. <https://doi.org/10.1684/mrh.2011.0299>

Kim, D. J., Xun, P., Liu, K., Loria, C., Yokota, K., Jacobs, D. R., Jr, & He, K. (2010). Magnesium intake in relation to systemic inflammation, insulin resistance, and the incidence of diabetes. *Diabetes care*, 33(12), 2604–2610. <https://doi.org/10.2337/dc10-0994>

- **Reduces inflammation**

Nielsen F. H. (2014). Effects of magnesium depletion on inflammation in chronic disease. *Current opinion in clinical nutrition and metabolic care*, 17(6), 525–530. <https://doi.org/10.1097/MCO.0000000000000093>

Barbagallo, M., & Dominguez, L. J. (2010). Magnesium and aging. *Current pharmaceutical design*, 16(7), 832–839. <https://doi.org/10.2174/138161210790883679>

Nielsen F. H. (2010). Magnesium, inflammation, and obesity in chronic disease. *Nutrition reviews*, 68(6), 333–340. <https://doi.org/10.1111/j.1753-4887.2010.00293.x>

Nielsen, F. H., Johnson, L. K., & Zeng, H. (2010). Magnesium supplementation improves indicators of low magnesium status and inflammatory stress in adults older than 51 years with poor quality sleep. *Magnesium research*, 23(4), 158–168. <https://doi.org/10.1684/mrh.2010.0220>

Chacko, S. A., Sul, J., Song, Y., Li, X., LeBlanc, J., You, Y., Butch, A., & Liu, S. (2011). Magnesium supplementation, metabolic and inflammatory markers, and global genomic and proteomic profiling: a randomized, double-blind, controlled, crossover trial in overweight individuals. *The American journal of clinical nutrition*, 93(2), 463–473. <https://doi.org/10.3945/ajcn.110.002949>

Vitamin B1:

- **Lowers risk of PMS**

Chocano-Bedoya, P. O., Manson, J. E., Hankinson, S. E., Willett, W. C., Johnson, S. R., Chasan-Taber, L., Ronnenberg, A. G., Bigelow, C., & Bertone-Johnson, E. R. (2011). Dietary B vitamin intake and incident premenstrual syndrome. *The American journal of clinical nutrition*, 93(5), 1080–1086. <https://doi.org/10.3945/ajcn.110.009530>

- **Reduces period cramping**

Zafari, M., Aghamohammady, A., & Tofighi, M. (2011). Comparing the effect of vitamin B1 (vit. B1) and ibuprofen on the treatment of primary dysmenorrhea. *Afr J Pharm Pharmacol*, 5(7), 874-8.

Gokhale, L. B. (1996). Curative treatment of primary (spasmodic) dysmenorrhoea. *The Indian journal of medical research*, 103, 227-231.

Abdollahifard, S., & Maddahfar, M. (2016). The effects of vitamin B1 on ameliorating of mental symptoms of the premenstrual syndrome. *European Psychiatry*, (33), S335.

- **Makes hair grow stronger and faster**

Almohanna, H. M., Ahmed, A. A., Tsatalis, J. P., & Tosti, A. (2019). The role of vitamins and minerals in hair loss: a review. *Dermatology and therapy*, 9(1), 51-70.

Plant based omega-3 fatty acid – alpha-linolenic acid (ALA) of which flaxseed is the richest plant source in the world!

Gebauer, S. K., Psota, T. L., Harris, W. S., & Kris-Etherton, P. M. (2006). n-3 fatty acid dietary recommendations and food sources to achieve essentiality and cardiovascular benefits. *The American journal of clinical nutrition*, 83(6), 1526S-1535S.

- **Reduces risk of heart disease**

Pan, A., Chen, M., Chowdhury, R., Wu, J. H., Sun, Q., Campos, H., Mozaffarian, D., & Hu, F. B. (2012). α -Linolenic acid and risk of cardiovascular disease: a systematic review and meta-analysis. *The American journal of clinical nutrition*, 96(6), 1262–1273. <https://doi.org/10.3945/ajcn.112.044040>

- **Reduces risk of stroke**

Blondeau, N., Lipsky, R. H., Bourourou, M., Duncan, M. W., Gorelick, P. B., & Marini, A. M. (2015). Alpha-linolenic acid: an omega-3 fatty acid with neuroprotective properties-ready for use in the stroke clinic?. *BioMed research international*, 2015, 519830. <https://doi.org/10.1155/2015/519830>

Blondeau N. (2016). The nutraceutical potential of omega-3 alpha-linolenic acid in reducing the consequences of stroke. *Biochimie*, 120, 49–55. <https://doi.org/10.1016/j.biochi.2015.06.005>

de Goede, J., Verschuren, W. M., Boer, J. M., Kromhout, D., & Geleijnse, J. M. (2011). Alpha-linolenic acid intake and 10-year incidence of coronary heart disease and stroke in 20,000

middle-aged men and women in the Netherlands. *PloS one*, 6(3), e17967.
<https://doi.org/10.1371/journal.pone.0017967>

- **A lower ratio of omega-6/omega-3 fatty acids reduces the risk of many of the chronic diseases**

Simopoulos A. P. (2002). The importance of the ratio of omega-6/omega-3 essential fatty acids. *Biomedicine & pharmacotherapy = Biomedecine & pharmacotherapie*, 56(8), 365–379.
[https://doi.org/10.1016/s0753-3322\(02\)00253-6](https://doi.org/10.1016/s0753-3322(02)00253-6)

- **Helps curb inflammation in the skin**

Jung, J. Y., Kwon, H. H., Hong, J. S., Yoon, J. Y., Park, M. S., Jang, M. Y., & Suh, D. H. (2014). Effect of dietary supplementation with omega-3 fatty acid and gamma-linolenic acid on acne vulgaris: a randomised, double-blind, controlled trial. *Acta dermato-venereologica*, 94(5), 521–526.

- **Supports wound healing process**

Goyal, A., Sharma, V., Upadhyay, N., Gill, S., & Sihag, M. (2014). Flax and flaxseed oil: an ancient medicine & modern functional food. *Journal of food science and technology*, 51(9), 1633–1653. <https://doi.org/10.1007/s13197-013-1247-9>

Fiber

- **Regulates blood sugar and lowers LDL cholesterol**

Kristensen, M., Jensen, M. G., Aarestrup, J., Petersen, K. E., Søndergaard, L., Mikkelsen, M. S., & Astrup, A. (2012). Flaxseed dietary fibers lower cholesterol and increase fecal fat excretion, but magnitude of effect depend on food type. *Nutrition & metabolism*, 9, 8.
<https://doi.org/10.1186/1743-7075-9-8>

Mani, U. V., Mani, I., Biswas, M., & Kumar, S. N. (2011). An open-label study on the effect of flax seed powder (*Linum usitatissimum*) supplementation in the management of diabetes mellitus. *Journal of dietary supplements*, 8(3), 257–265.
<https://doi.org/10.3109/19390211.2011.593615>

Mani, U. V., Mani, I., Biswas, M., & Kumar, S. N. (2011). An open-label study on the effect of flax seed powder (*Linum usitatissimum*) supplementation in the management of diabetes mellitus. *Journal of dietary supplements*, 8(3), 257–265.
<https://doi.org/10.3109/19390211.2011.593615>

Nazni, P., Amrithaveni, M., & Poongodi, V. T. (2006). Impact of flaxseed based therapeutic food on selected type II diabetic patients. *Indian J Nutr Diet*, 43, 141-145.

Kajla, P., Sharma, A., & Sood, D. R. (2015). Flaxseed-a potential functional food source. *Journal of food science and technology*, 52(4), 1857–1871.
<https://doi.org/10.1007/s13197-014-1293-y>

Thakur, G., Mitra, A., Pal, K., & Rousseau, D. (2009). Effect of flaxseed gum on reduction of blood glucose and cholesterol in type 2 diabetic patients. *International journal of food sciences and nutrition*, 60 Suppl 6, 126–136. <https://doi.org/10.1080/09637480903022735>

Saxena, S., & Katare, C. (2014). Evaluation of flaxseed formulation as a potential therapeutic agent in mitigation of dyslipidemia. *Biomedical journal*, 37(6), 386–390. <https://doi.org/10.4103/2319-4170.126447>

Patade, A., Devareddy, L., Lucas, E. A., Korlagunta, K., Daggy, B. P., & Arjmandi, B. H. (2008). Flaxseed reduces total and LDL cholesterol concentrations in Native American postmenopausal women. *Journal of women's health* (2002), 17(3), 355–366. <https://doi.org/10.1089/jwh.2007.0359>

- **Reduces appetite**

Ibrügger, S., Kristensen, M., Mikkelsen, M. S., & Astrup, A. (2012). Flaxseed dietary fiber supplements for suppression of appetite and food intake. *Appetite*, 58(2), 490–495. <https://doi.org/10.1016/j.appet.2011.12.024>

Kristensen, M., Savorani, F., Christensen, S., Engelsen, S. B., Bügel, S., Toubro, S., Tetens, I., & Astrup, A. (2013). Flaxseed dietary fibers suppress postprandial lipemia and appetite sensation in young men. *Nutrition, metabolism, and cardiovascular diseases : NMCD*, 23(2), 136–143. <https://doi.org/10.1016/j.numecd.2011.03.004>

- **Improves digestion and immune function by feeding the good bacteria in the gut**

Anderson, J. W., Baird, P., Davis, R. H., Jr, Ferreri, S., Knudtson, M., Koraym, A., Waters, V., & Williams, C. L. (2009). Health benefits of dietary fiber. *Nutrition reviews*, 67(4), 188–205. <https://doi.org/10.1111/j.1753-4887.2009.00189.x>

Amino Acids: Arginine & Glutamine:

- **Support vascular and immune systems**

Gornik, H. L., & Creager, M. A. (2004). Arginine and endothelial and vascular health. *The Journal of nutrition*, 134(10 Suppl), 2880S–2895S. <https://doi.org/10.1093/jn/134.10.2880S>

Avenell A. (2006). Glutamine in critical care: current evidence from systematic reviews. *The Proceedings of the Nutrition Society*, 65(3), 236–241. <https://doi.org/10.1079/pns2006498>

Pumpkin seeds

Pumpkin seeds are an excellent source of magnesium, zinc, phytoestrogens and healthy fats that have been shown to provide numerous health benefits.

Magnesium:

- **Reduces menstrual migraines**

Facchinetti, F., Sances, G., Borella, P., Genazzani, A. R., & Nappi, G. (1991). Magnesium prophylaxis of menstrual migraine: effects on intracellular magnesium. *Headache: The Journal of Head and Face Pain*, 31(5), 298-301.

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Fathizadeh, N., Ebrahimi, E., Valiani, M., Tavakoli, N., & Yar, M. H. (2010). Evaluating the effect of magnesium and magnesium plus vitamin B6 supplement on the severity of premenstrual syndrome. *Iranian Journal of Nursing and Midwifery Research*, 15(Suppl1), 401.

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Held, K., Antonijevic, I. A., Künzel, H., Uhr, M., Wetter, T. C., Golly, I. C., Steiger, A., & Murck, H. (2002). Oral Mg(2+) supplementation reverses age-related neuroendocrine and sleep EEG changes in humans. *Pharmacopsychiatry*, 35(4), 135–143. <https://doi.org/10.1055/s-2002-33195>

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Chacko, S. A., Sul, J., Song, Y., Li, X., LeBlanc, J., You, Y., Butch, A., & Liu, S. (2011). Magnesium supplementation, metabolic and inflammatory markers, and global genomic and proteomic profiling: a randomized, double-blind, controlled, crossover trial in overweight individuals. *The American journal of clinical nutrition*, 93(2), 463–473. <https://doi.org/10.3945/ajcn.110.002949>

Zinc:

- **Boosts mood**

Siahbazi, S., Behboudi-Gandevani, S., Moghaddam-Banaem, L., & Montazeri, A. (2017). Effect of zinc sulfate supplementation on premenstrual syndrome and health-related quality of life: Clinical randomized controlled trial. *Journal of Obstetrics and Gynaecology Research*, 43(5), 887-894.

- **Reduces period pains**

Eby, G. A. (2007). Zinc treatment prevents dysmenorrhea. *Medical Hypotheses*, 69(2), 297-301.

Sangestani, G., Khatiban, M., Marci, R., & Piva, I. (2015). The positive effects of zinc supplements on the improvement of primary dysmenorrhea and premenstrual symptoms: a double-blind, randomized, controlled trial. *Journal of Midwifery and Reproductive Health*, 3(3), 378-384.

Zekavat, O. R., Karimi, M. Y., Amanat, A., & Alipour, F. (2015). A randomised controlled trial of oral zinc sulphate for primary dysmenorrhoea in adolescent females. *Australian and New Zealand Journal of Obstetrics and Gynaecology*, 55(4), 369-373.

Teimoori, B., Ghasemi, M., Hoseini, Z. S., & Razavi, M. (2016). The Efficacy of Zinc Administration in the Treatment of Primary Dysmenorrhea. *Oman medical journal*, 31(2), 107–111. <https://doi.org/10.5001/omj.2016.21>

- **Reduces inflammation**

Bao, B., Prasad, A. S., Beck, F. W., Fitzgerald, J. T., Snell, D., Bao, G. W., Singh, T., & Cardozo, L. J. (2010). Zinc decreases C-reactive protein, lipid peroxidation, and inflammatory cytokines in elderly subjects: a potential implication of zinc as an atheroprotective agent. *The American journal of clinical nutrition*, 91(6), 1634–1641. <https://doi.org/10.3945/ajcn.2009.28836>

Prasad, A. S. (2014). Zinc is an antioxidant and anti-inflammatory agent: its role in human health. *Frontiers in nutrition*, 1, 14.

- **Helps treat acne**

Bae, Y. S., Hill, N. D., Bibi, Y., Dreiherr, J., & Cohen, A. D. (2010). Innovative uses for zinc in dermatology. *Dermatologic clinics*, 28(3), 587–597. <https://doi.org/10.1016/j.det.2010.03.006>

Rostami Mogaddam, M., Safavi Ardabili, N., Maleki, N., & Soflaee, M. (2014). Correlation between the severity and type of acne lesions with serum zinc levels in patients with acne vulgaris. *BioMed research international*, 2014, 474108. <https://doi.org/10.1155/2014/474108>

- **Supports wound healing process**

Momen-Heravi, M., Barahimi, E., Razzaghi, R., Bahmani, F., Gilasi, H. R., & Asemi, Z. (2017). The effects of zinc supplementation on wound healing and metabolic status in patients with diabetic foot ulcer: A randomized, double-blind, placebo-controlled trial. *Wound repair and regeneration : official publication of the Wound Healing Society [and] the European Tissue Repair Society*, 25(3), 512–520. <https://doi.org/10.1111/wrr.12537>

Desneves, K. J., Todorovic, B. E., Cassar, A., & Crowe, T. C. (2005). Treatment with supplementary arginine, vitamin C and zinc in patients with pressure ulcers: a randomised controlled trial. *Clinical nutrition (Edinburgh, Scotland)*, 24(6), 979–987. <https://doi.org/10.1016/j.clnu.2005.06.011>

- **Keeps immune system strong**

Hemilä H. (2017). Zinc lozenges and the common cold: a meta-analysis comparing zinc acetate and zinc gluconate, and the role of zinc dosage. *JRSM open*, 8(5), 2054270417694291. <https://doi.org/10.1177/2054270417694291>

Haase, H., & Rink, L. (2009). The immune system and the impact of zinc during aging. *Immunity & ageing : I & A*, 6, 9. <https://doi.org/10.1186/1742-4933-6-9>

Phytoestrogens:

- **Reduce high blood pressure and high cholesterol levels**

Gossell-Williams, M., Hyde, C., Hunter, T., Simms-Stewart, D., Fletcher, H., McGrowder, D., & Walters, C. A. (2011). Improvement in HDL cholesterol in postmenopausal women supplemented with pumpkin seed oil: pilot study. *Climacteric : the journal of the International Menopause Society*, 14(5), 558–564. <https://doi.org/10.3109/13697137.2011.563882>

- **Reduce risk of certain cancers**

Richter, D., Abarzua, S., Chrobak, M., Vrekoussis, T., Weissenbacher, T., Kuhn, C., Schulze, S., Kupka, M. S., Friese, K., Briese, V., Piechulla, B., Makrigiannakis, A., Jeschke, U., & Dian, D. (2013). Effects of phytoestrogen extracts isolated from pumpkin seeds on estradiol production and ER/PR expression in breast cancer and trophoblast tumor cells. *Nutrition and cancer*, 65(5), 739–745. <https://doi.org/10.1080/01635581.2013.797000>

Xanthopoulou, M. N., Nomikos, T., Fragopoulou, E., & Antonopoulou, S. (2009). Antioxidant and lipoxygenase inhibitory activities of pumpkin seed extracts. *Food Research International*, 42(5-6), 641-646.

Zaineddin, A. K., Buck, K., Vrieling, A., Heinz, J., Flesch-Janys, D., Linseisen, J., & Chang-Claude, J. (2012). The association between dietary lignans, phytoestrogen-rich foods, and fiber intake and postmenopausal breast cancer risk: a German case-control study. *Nutrition and cancer*, 64(5), 652–665. <https://doi.org/10.1080/01635581.2012.683227>

Sesame seeds

Sesame seeds may be small but they are a real nutritional powerhouse since they are packed with variety of nutrients ranging from lignans, vitamin B1, calcium, magnesium, zinc, selenium, and other beneficial compounds.

Lignans (Sesamin, Sesamol, Pinoresinol):

- **Regulate menstrual cycle**

Yavari, M., Rouholamn, S., Tansaz, M., Bioos, S., & Esmaeili, S. (2014). Sesame a treatment of menstrual bleeding cessation in iranian traditional medicine: Results from a pilot study. *Shiraz e med J*, 15(3), e21893.i

- **Reduce intensity of hot flushes during menopause**

Bedell, S., Nachtigall, M., & Naftolin, F. (2014). The pros and cons of plant estrogens for menopause. *The Journal of steroid biochemistry and molecular biology*, 139, 225–236. <https://doi.org/10.1016/j.jsbmb.2012.12.004>

- **Improve sex hormone levels in postmenopausal women**

Wu, W. H., Kang, Y. P., Wang, N. H., Jou, H. J., & Wang, T. A. (2006). Sesame ingestion affects sex hormones, antioxidant status, and blood lipids in postmenopausal women. *The Journal of nutrition*, 136(5), 1270–1275. <https://doi.org/10.1093/jn/136.5.1270>

- **Prevent various types of cancer**

Majdalawieh, A. F., Massri, M., & Nasrallah, G. K. (2017). A comprehensive review on the anti-cancer properties and mechanisms of action of sesamin, a lignan in sesame seeds (*Sesamum indicum*). *European journal of pharmacology*, 815, 512–521. <https://doi.org/10.1016/j.ejphar.2017.10.020>

Majdalawieh, A. F., & Mansour, Z. R. (2019). Sesamol, a major lignan in sesame seeds (*Sesamum indicum*): Anti-cancer properties and mechanisms of action. *European journal of pharmacology*, 855, 75–89. <https://doi.org/10.1016/j.ejphar.2019.05.008>

Coulman, K. D., Liu, Z., Hum, W. Q., Michaelides, J., & Thompson, L. U. (2005). Whole sesame seed is as rich a source of mammalian lignan precursors as whole flaxseed. *Nutrition and cancer*, 52(2), 156–165. https://doi.org/10.1207/s15327914nc5202_6

Cooney, R. V., Custer, L. J., Okinaka, L., & Franke, A. A. (2001). Effects of dietary sesame seeds on plasma tocopherol levels. *Nutrition and cancer*, 39(1), 66–71. https://doi.org/10.1207/S15327914nc391_9

- **Lower cholesterol levels**

Ostlund R. E., Jr (2004). Phytosterols and cholesterol metabolism. *Current opinion in lipidology*, 15(1), 37–41. <https://doi.org/10.1097/00041433-200402000-00008>

Rogi, T., Tomimori, N., Ono, Y., & Kiso, Y. (2011). The mechanism underlying the synergetic hypocholesterolemic effect of sesamin and α -tocopherol in rats fed a high-cholesterol

diet. *Journal of pharmacological sciences*, 115(3), 408–416. <https://doi.org/10.1254/jphs.10287fp>

- **Improve blood pressure**

Rogi, T., Tomimori, N., Ono, Y., & Kiso, Y. (2011). The mechanism underlying the synergetic hypocholesterolemic effect of sesamin and α -tocopherol in rats fed a high-cholesterol diet. *Journal of pharmacological sciences*, 115(3), 408–416. <https://doi.org/10.1254/jphs.10287fp>

Wichitsranoi, J., Weerapreeyakul, N., Boonsiri, P., Settasatian, C., Settasatian, N., Komanasin, N., Sirijaichingkul, S., Teerajetgul, Y., Rangkadilok, N., & Leelayuwat, N. (2011). Antihypertensive and antioxidant effects of dietary black sesame meal in pre-hypertensive humans. *Nutrition journal*, 10, 82. <https://doi.org/10.1186/1475-2891-10-82>

- **Regulate blood sugar**

Wikul, A., Damsud, T., Kataoka, K., & Phuwapraisirisan, P. (2012). (+)-Pinoresinol is a putative hypoglycemic agent in defatted sesame (*Sesamum indicum*) seeds though inhibiting α -glucosidase. *Bioorganic & medicinal chemistry letters*, 22(16), 5215–5217. <https://doi.org/10.1016/j.bmcl.2012.06.068>

Haidari, F., Mohammadshahi, M., Zarei, M., & Gorji, Z. (2016). Effects of Sesame Butter (Ardeh) versus Sesame Oil on Metabolic and Oxidative Stress Markers in Streptozotocin-Induced Diabetic Rats. *Iranian journal of medical sciences*, 41(2), 102–109.

- **Reduce inflammation**

Monteiro, E. M., Chibli, L. A., Yamamoto, C. H., Pereira, M. C., Vilela, F. M., Rodarte, M. P., Pinto, M. A., do Amaral, M., Silvério, M. S., Araújo, A. L., de Araújo, A., Del-Vechio-Vieira, G., & de Sousa, O. V. (2014). Antinociceptive and anti-inflammatory activities of the sesame oil and sesamin. *Nutrients*, 6(5), 1931–1944. <https://doi.org/10.3390/nu6051931>

Li, L., Piao, H., Zheng, M., Jin, Z., Zhao, L., & Yan, G. (2016). Sesamin attenuates allergic airway inflammation through the suppression of nuclear factor-kappa B activation. *Experimental and therapeutic medicine*, 12(6), 4175–4181. <https://doi.org/10.3892/etm.2016.3903>

Ahmad, S., ElSherbiny, N. M., Jamal, M. S., Alzahrani, F. A., Haque, R., Khan, R., Zaidi, S. K., AlQahtani, M. H., Liou, G. I., & Bhatia, K. (2016). Anti-inflammatory role of sesamin in STZ induced mice model of diabetic retinopathy. *Journal of neuroimmunology*, 295-296, 47–53. <https://doi.org/10.1016/j.jneuroim.2016.04.002>

Narasimhulu, C. A., Selvarajan, K., Burge, K. Y., Litvinov, D., Sengupta, B., & Parthasarathy, S. (2016). Water-Soluble Components of Sesame Oil Reduce Inflammation and Atherosclerosis. *Journal of medicinal food*, 19(7), 629–637. <https://doi.org/10.1089/jmf.2015.0154>

Narasimhulu, C. A., Selvarajan, K., Litvinov, D., & Parthasarathy, S. (2015). Anti-atherosclerotic and anti-inflammatory actions of sesame oil. *Journal of medicinal food*, 18(1), 11–20. <https://doi.org/10.1089/jmf.2014.0138>

- **Support wound healing**

Kiran, K., & Asad, M. (2008). Wound healing activity of *Sesamum indicum* L seed and oil in rats. *Indian journal of experimental biology*, 46(11), 777.

Calcium:

- **Eases symptoms of PMS**

Saeedian Kia, A., Amani, R., & Cheraghian, B. (2015). The Association between the Risk of Premenstrual Syndrome and Vitamin D, Calcium, and Magnesium Status among University Students: A Case Control Study. *Health promotion perspectives*, 5(3), 225–230. <https://doi.org/10.15171/hpp.2015.027>

Abdi, F., Ozgoli, G., & Rahnemaie, F. S. (2019). A systematic review of the role of vitamin D and calcium in premenstrual syndrome. *Obstetrics & gynecology science*, 62(2), 73–86. <https://doi.org/10.5468/ogs.2019.62.2.73>

Bertone-Johnson, E. R., Hankinson, S. E., Bendich, A., Johnson, S. R., Willett, W. C., & Manson, J. E. (2005). Calcium and vitamin D intake and risk of incident premenstrual syndrome. *Archives of internal medicine*, 165(11), 1246–1252. <https://doi.org/10.1001/archinte.165.11.1246>

Whelan, A. M., Jurgens, T. M., & Naylor, H. (2009). Herbs, vitamins and minerals in the treatment of premenstrual syndrome: a systematic review. *The Canadian journal of clinical pharmacology = Journal canadien de pharmacologie clinique*, 16(3), e407–e429.

- **Supports bone health**

North American Menopause Society (2006). The role of calcium in peri- and postmenopausal women: 2006 position statement of the North American Menopause Society. *Menopause (New York, N.Y.)*, 13(6), 862–880. <https://doi.org/10.1097/01.gme.0000243566.25205.0b>

Dawson-Hughes, B., Dallal, G. E., Krall, E. A., Sadowski, L., Sahyoun, N., & Tannenbaum, S. (1990). A controlled trial of the effect of calcium supplementation on bone density in postmenopausal women. *The New England journal of medicine*, 323(13), 878–883. <https://doi.org/10.1056/NEJM199009273231305>

- **Lowers risk of developing breast cancer**

Lin, J., Manson, J. E., Lee, I. M., Cook, N. R., Buring, J. E., & Zhang, S. M. (2007). Intakes of calcium and vitamin D and breast cancer risk in women. *Archives of internal medicine*, 167(10), 1050–1059. <https://doi.org/10.1001/archinte.167.10.1050>

Cui, Y., & Rohan, T. E. (2006). Vitamin D, calcium, and breast cancer risk: a review. *Cancer epidemiology, biomarkers & prevention : a publication of the American Association for Cancer Research, cosponsored by the American Society of Preventive Oncology*, 15(8), 1427–1437. <https://doi.org/10.1158/1055-9965.EPI-06-0075>

Bérubé, S., Diorio, C., Mâsse, B., Hébert-Croteau, N., Byrne, C., Côté, G., Pollak, M., Yaffe, M., & Brisson, J. (2005). Vitamin D and calcium intakes from food or supplements and mammographic breast density. *Cancer epidemiology, biomarkers & prevention : a publication*

of the American Association for Cancer Research, cosponsored by the American Society of Preventive Oncology, 14(7), 1653–1659. <https://doi.org/10.1158/1055-9965.EPI-05-0068>

Magnesium:

- **Reduces menstrual migraines**

Facchinetti, F., Sances, G., Borella, P., Genazzani, A. R., & Nappi, G. (1991). Magnesium prophylaxis of menstrual migraine: effects on intracellular magnesium. *Headache: The Journal of Head and Face Pain*, 31(5), 298-301.

Allais, G., Gabellari, I. C., Burzio, C., Rolando, S., De Lorenzo, C., Mana, O., & Benedetto, C. (2012). Premenstrual syndrome and migraine. *Neurological Sciences*, 33(1), 111-115.

- **Reduces PMS symptoms**

Fathizadeh, N., Ebrahimi, E., Valiani, M., Tavakoli, N., & Yar, M. H. (2010). Evaluating the effect of magnesium and magnesium plus vitamin B6 supplement on the severity of premenstrual syndrome. *Iranian Journal of Nursing and Midwifery Research*, 15(Suppl1), 401.

London, R. S., Bradley, L., & Chiamori, N. Y. (1991). Effect of a nutritional supplement on premenstrual symptomatology in women with premenstrual syndrome: a double-blind longitudinal study. *Journal of the American College of Nutrition*, 10(5), 494-499.

Quaranta, S., Buscaglia, M. A., Meroni, M. G., Colombo, E., & Cella, S. (2007). Pilot study of the efficacy and safety of a modified-release magnesium 250mg tablet (Sincromag®) for the treatment of premenstrual syndrome. *Clinical drug investigation*, 27(1), 51-58.

De Souza, M. C., Walker, A. F., Robinson, P. A., & Bolland, K. (2000). A synergistic effect of a daily supplement for 1 month of 200 mg magnesium plus 50 mg vitamin B6 for the relief of anxiety-related premenstrual symptoms: a randomized, double-blind, crossover study. *Journal of women's health & gender-based medicine*, 9(2), 131-139.

Bendich, A. (2000). The potential for dietary supplements to reduce premenstrual syndrome (PMS) symptoms. *Journal of the American college of nutrition*, 19(1), 3-12.

- **Relieves premenstrual mood changes**

Facchinetti, F., Borella, P., Sances, G., Fioroni, L., Nappi, R. E., & Genazzani, A. R. (1991). Oral magnesium successfully relieves premenstrual mood changes. *Obstetrics and gynecology*, 78(2), 177–181.

- **Reduces premenstrual water retention**

Walker, A. F., De Souza, M. C., Vickers, M. F., Abeyasekera, S., Collins, M. L., & Trinca, L. A. (1998). Magnesium supplementation alleviates premenstrual symptoms of fluid retention. *Journal of women's health*, 7(9), 1157–1165. <https://doi.org/10.1089/jwh.1998.7.1157>

- **Improves sleep**

Chollet, D., Franken, P., Raffin, Y., Henrotte, J. G., Widmer, J., Malafosse, A., & Tafti, M. (2001). Magnesium involvement in sleep: genetic and nutritional models. *Behavior genetics*, 31(5), 413–425. <https://doi.org/10.1023/a:1012790321071>

Held, K., Antonijevic, I. A., Künzel, H., Uhr, M., Wetter, T. C., Golly, I. C., Steiger, A., & Murck, H. (2002). Oral Mg(2+) supplementation reverses age-related neuroendocrine and sleep EEG changes in humans. *Pharmacopsychiatry*, 35(4), 135–143. <https://doi.org/10.1055/s-2002-33195>

- **Lowers risk of developing diabetes**

Lopez-Ridaura, R., Willett, W. C., Rimm, E. B., Liu, S., Stampfer, M. J., Manson, J. E., & Hu, F. B. (2004). Magnesium intake and risk of type 2 diabetes in men and women. *Diabetes care*, 27(1), 134–140. <https://doi.org/10.2337/diacare.27.1.134>

Larsson, S. C., & Wolk, A. (2007). Magnesium intake and risk of type 2 diabetes: a meta-analysis. *Journal of internal medicine*, 262(2), 208–214. <https://doi.org/10.1111/j.1365-2796.2007.01840.x>

Rodríguez-Morán, M., Simental Mendía, L. E., Zambrano Galván, G., & Guerrero-Romero, F. (2011). The role of magnesium in type 2 diabetes: a brief based-clinical review. *Magnesium research*, 24(4), 156–162. <https://doi.org/10.1684/mrh.2011.0299>

Kim, D. J., Xun, P., Liu, K., Loria, C., Yokota, K., Jacobs, D. R., Jr, & He, K. (2010). Magnesium intake in relation to systemic inflammation, insulin resistance, and the incidence of diabetes. *Diabetes care*, 33(12), 2604–2610. <https://doi.org/10.2337/dc10-0994>

- **Reduces inflammation**

Nielsen F. H. (2014). Effects of magnesium depletion on inflammation in chronic disease. *Current opinion in clinical nutrition and metabolic care*, 17(6), 525–530. <https://doi.org/10.1097/MCO.0000000000000093>

Barbagallo, M., & Dominguez, L. J. (2010). Magnesium and aging. *Current pharmaceutical design*, 16(7), 832–839. <https://doi.org/10.2174/138161210790883679>

Nielsen F. H. (2010). Magnesium, inflammation, and obesity in chronic disease. *Nutrition reviews*, 68(6), 333–340. <https://doi.org/10.1111/j.1753-4887.2010.00293.x>

Nielsen, F. H., Johnson, L. K., & Zeng, H. (2010). Magnesium supplementation improves indicators of low magnesium status and inflammatory stress in adults older than 51 years with poor quality sleep. *Magnesium research*, 23(4), 158–168. <https://doi.org/10.1684/mrh.2010.0220>

Chacko, S. A., Sul, J., Song, Y., Li, X., LeBlanc, J., You, Y., Butch, A., & Liu, S. (2011). Magnesium supplementation, metabolic and inflammatory markers, and global genomic and proteomic profiling: a randomized, double-blind, controlled, crossover trial in overweight individuals. *The American journal of clinical nutrition*, 93(2), 463–473. <https://doi.org/10.3945/ajcn.110.002949>

Zinc:

- **Boosts mood**

Siahbazi, S., Behboudi-Gandevani, S., Moghaddam-Banaem, L., & Montazeri, A. (2017). Effect of zinc sulfate supplementation on premenstrual syndrome and health-related quality of life: Clinical randomized controlled trial. *Journal of Obstetrics and Gynaecology Research*, 43(5), 887-894.

- **Reduces period pains**

Eby, G. A. (2007). Zinc treatment prevents dysmenorrhea. *Medical Hypotheses*, 69(2), 297-301.

Sangestani, G., Khatiban, M., Marci, R., & Piva, I. (2015). The positive effects of zinc supplements on the improvement of primary dysmenorrhea and premenstrual symptoms: a double-blind, randomized, controlled trial. *Journal of Midwifery and Reproductive Health*, 3(3), 378-384.

Zekavat, O. R., Karimi, M. Y., Amanat, A., & Alipour, F. (2015). A randomised controlled trial of oral zinc sulphate for primary dysmenorrhoea in adolescent females. *Australian and New Zealand Journal of Obstetrics and Gynaecology*, 55(4), 369-373.

Teimoori, B., Ghasemi, M., Hoseini, Z. S., & Razavi, M. (2016). The Efficacy of Zinc Administration in the Treatment of Primary Dysmenorrhea. *Oman medical journal*, 31(2), 107–111. <https://doi.org/10.5001/omj.2016.21>

- **Reduces inflammation**

Bao, B., Prasad, A. S., Beck, F. W., Fitzgerald, J. T., Snell, D., Bao, G. W., Singh, T., & Cardozo, L. J. (2010). Zinc decreases C-reactive protein, lipid peroxidation, and inflammatory cytokines in elderly subjects: a potential implication of zinc as an atheroprotective agent. *The American journal of clinical nutrition*, 91(6), 1634–1641. <https://doi.org/10.3945/ajcn.2009.28836>

Prasad, A. S. (2014). Zinc is an antioxidant and anti-inflammatory agent: its role in human health. *Frontiers in nutrition*, 1, 14.

- **Helps treat acne**

Bae, Y. S., Hill, N. D., Bibi, Y., Dreiherr, J., & Cohen, A. D. (2010). Innovative uses for zinc in dermatology. *Dermatologic clinics*, 28(3), 587–597. <https://doi.org/10.1016/j.det.2010.03.006>

Rostami Mogaddam, M., Safavi Ardabili, N., Maleki, N., & Soflaee, M. (2014). Correlation between the severity and type of acne lesions with serum zinc levels in patients with acne vulgaris. *BioMed research international*, 2014, 474108. <https://doi.org/10.1155/2014/474108>

- **Supports wound healing process**

Momen-Heravi, M., Barahimi, E., Razzaghi, R., Bahmani, F., Gilasi, H. R., & Asemi, Z. (2017). The effects of zinc supplementation on wound healing and metabolic status in patients with diabetic foot ulcer: A randomized, double-blind, placebo-controlled trial. *Wound repair and regeneration : official publication of the Wound Healing Society [and] the European Tissue Repair Society*, 25(3), 512–520. <https://doi.org/10.1111/wrr.12537>

Desneves, K. J., Todorovic, B. E., Cassar, A., & Crowe, T. C. (2005). Treatment with supplementary arginine, vitamin C and zinc in patients with pressure ulcers: a randomised controlled trial. *Clinical nutrition (Edinburgh, Scotland)*, 24(6), 979–987. <https://doi.org/10.1016/j.clnu.2005.06.011>

- **Keeps immune system strong**

Hemilä H. (2017). Zinc lozenges and the common cold: a meta-analysis comparing zinc acetate and zinc gluconate, and the role of zinc dosage. *JRSM open*, 8(5), 2054270417694291. <https://doi.org/10.1177/2054270417694291>

Haase, H., & Rink, L. (2009). The immune system and the impact of zinc during aging. *Immunity & ageing : I & A*, 6, 9. <https://doi.org/10.1186/1742-4933-6-9>

Vitamin B1:

- **Lowers risk of PMS**

Chocano-Bedoya, P. O., Manson, J. E., Hankinson, S. E., Willett, W. C., Johnson, S. R., Chasan-Taber, L., Ronnenberg, A. G., Bigelow, C., & Bertone-Johnson, E. R. (2011). Dietary B vitamin intake and incident premenstrual syndrome. *The American journal of clinical nutrition*, 93(5), 1080–1086. <https://doi.org/10.3945/ajcn.110.009530>

- **Reduces period cramping**

Zafari, M., Aghamohammady, A., & Tofighi, M. (2011). Comparing the effect of vitamin B1 (vit. B1) and ibuprofen on the treatment of primary dysmenorrhea. *Afr J Pharm Pharmacol*, 5(7), 874-8.

Gokhale, L. B. (1996). Curative treatment of primary (spasmodic) dysmenorrhoea. *The Indian journal of medical research*, 103, 227-231.

Abdollahifard, S., & Maddahfar, M. (2016). The effects of vitamin B1 on ameliorating of mental symptoms of the premenstrual syndrome. *European Psychiatry*, (33), S335.

- **Makes hair grow stronger and faster**

Almohanna, H. M., Ahmed, A. A., Tsatalis, J. P., & Tosti, A. (2019). The role of vitamins and minerals in hair loss: a review. *Dermatology and therapy*, 9(1), 51-70.

Selenium:

- **Supports thyroid health**

Rayman, M. P., Thompson, A. J., Bekaert, B., Catterick, J., Galassini, R., Hall, E., Warren-Perry, M., & Beckett, G. J. (2008). Randomized controlled trial of the effect of selenium supplementation on thyroid function in the elderly in the United Kingdom. *The American journal of clinical nutrition*, 87(2), 370–378. <https://doi.org/10.1093/ajcn/87.2.370>

Ventura, M., Melo, M., & Carrilho, F. (2017). Selenium and Thyroid Disease: From Pathophysiology to Treatment. *International journal of endocrinology*, 2017, 1297658. <https://doi.org/10.1155/2017/1297658>

- **Fights oxidative stress**

Schnabel, R., Lubos, E., Messow, C. M., Sinning, C. R., Zeller, T., Wild, P. S., Peetz, D., Handy, D. E., Munzel, T., Loscalzo, J., Lackner, K. J., & Blankenberg, S. (2008). Selenium supplementation improves antioxidant capacity in vitro and in vivo in patients with coronary artery disease The SElenium Therapy in Coronary Artery disease Patients (SETCAP) Study. *American heart journal*, 156(6), 1201.e1–1201.e12011. <https://doi.org/10.1016/j.ahj.2008.09.004>

- **Lowers risk of certain cancers**

Puspitasari, I. M., Abdulah, R., Yamazaki, C., Kameo, S., Nakano, T., & Koyama, H. (2014). Updates on clinical studies of selenium supplementation in radiotherapy. *Radiation oncology (London, England)*, 9, 125. <https://doi.org/10.1186/1748-717X-9-125>

Cai, X., Wang, C., Yu, W., Fan, W., Wang, S., Shen, N., Wu, P., Li, X., & Wang, F. (2016). Selenium Exposure and Cancer Risk: an Updated Meta-analysis and Meta-regression. *Scientific reports*, 6, 19213. <https://doi.org/10.1038/srep19213>

- **Supports immune system**

Hoffmann, P. R., & Berry, M. J. (2008). The influence of selenium on immune responses. *Molecular nutrition & food research*, 52(11), 1273–1280. <https://doi.org/10.1002/mnfr.200700330>

Steinbrenner, H., Al-Quraishy, S., Dkhil, M. A., Wunderlich, F., & Sies, H. (2015). Dietary selenium in adjuvant therapy of viral and bacterial infections. *Advances in nutrition (Bethesda, Md.)*, 6(1), 73–82. <https://doi.org/10.3945/an.114.007575>

Sunflower seeds

Sunflower seeds are loaded with essential vitamins and minerals, including vitamin E and B6, flavonoids, magnesium, zinc and selenium which support your women's health and make your skin glow.

Vitamin B6:

- **Minimizes premenstrual syndrome**

Doll, H., Brown, S., Thurston, A., & Vessey, M. (1989). Pyridoxine (vitamin B6) and the premenstrual syndrome: a randomized crossover trial. *The Journal of the Royal College of General Practitioners*, 39(326), 364-368.

Kashanian, M., Mazinani, R., Jalalmanesh, S., & Babayanzad Ahari, S. (2007). Pyridoxine (vitamin B6) therapy for premenstrual syndrome. *International Journal of Gynecology & Obstetrics*, 96(1), 43-44.

Wyatt, K. M., Dimmock, P. W., Jones, P. W., & O'Brien, P. S. (1999). Efficacy of vitamin B-6 in the treatment of premenstrual syndrome: systematic review. *Bmj*, 318(7195), 1375-1381.

De Souza, M. C., Walker, A. F., Robinson, P. A., & Bolland, K. (2000). A synergistic effect of a daily supplement for 1 month of 200 mg magnesium plus 50 mg vitamin B6 for the relief of anxiety-related premenstrual symptoms: a randomized, double-blind, crossover study. *Journal of women's health & gender-based medicine*, 9(2), 131-139.

Fathizadeh, N., Ebrahimi, E., Valiani, M., Tavakoli, N., & Yar, M. H. (2010). Evaluating the effect of magnesium and magnesium plus vitamin B6 supplement on the severity of premenstrual syndrome. *Iranian Journal of Nursing and Midwifery Research*, 15(Suppl1), 401.

- **Reduces breast pain**

Shobeiri, F., Oshvandi, K., & Nazari, M. (2015). Clinical effectiveness of vitamin E and vitamin B6 for improving pain severity in cyclic mastalgia. *Iranian journal of nursing and midwifery research*, 20(6), 723-727. <https://doi.org/10.4103/1735-9066.170003>

- **Prevents eye diseases**

Christen, W. G., Glynn, R. J., Chew, E. Y., Albert, C. M., & Manson, J. E. (2009). Folic acid, pyridoxine, and cyanocobalamin combination treatment and age-related macular degeneration in women: the Women's Antioxidant and Folic Acid Cardiovascular Study. *Archives of internal medicine*, 169(4), 335-341. <https://doi.org/10.1001/archinternmed.2008.574>

Sofi, F., Marcucci, R., Bolli, P., Giambene, B., Sodi, A., Fedi, S., Menchini, U., Gensini, G. F., Abbate, R., & Prisco, D. (2008). Low vitamin B6 and folic acid levels are associated with retinal vein occlusion independently of homocysteine levels. *Atherosclerosis*, 198(1), 223-227. <https://doi.org/10.1016/j.atherosclerosis.2007.09.009>

Magnesium:

- **Reduces menstrual migraines**

Facchinetti, F., Sances, G., Borella, P., Genazzani, A. R., & Nappi, G. (1991). Magnesium prophylaxis of menstrual migraine: effects on intracellular magnesium. *Headache: The Journal of Head and Face Pain*, 31(5), 298-301.

Allais, G., Gabellari, I. C., Burzio, C., Rolando, S., De Lorenzo, C., Mana, O., & Benedetto, C. (2012). Premenstrual syndrome and migraine. *Neurological Sciences*, 33(1), 111-115.

- **Reduces premenstrual syndrome**

Fathizadeh, N., Ebrahimi, E., Valiani, M., Tavakoli, N., & Yar, M. H. (2010). Evaluating the effect of magnesium and magnesium plus vitamin B6 supplement on the severity of premenstrual syndrome. *Iranian Journal of Nursing and Midwifery Research*, 15(Suppl1), 401.

London, R. S., Bradley, L., & Chiamori, N. Y. (1991). Effect of a nutritional supplement on premenstrual symptomatology in women with premenstrual syndrome: a double-blind longitudinal study. *Journal of the American College of Nutrition*, 10(5), 494-499.

Quaranta, S., Buscaglia, M. A., Meroni, M. G., Colombo, E., & Cella, S. (2007). Pilot study of the efficacy and safety of a modified-release magnesium 250mg tablet (Sincromag®) for the treatment of premenstrual syndrome. *Clinical drug investigation*, 27(1), 51-58.

De Souza, M. C., Walker, A. F., Robinson, P. A., & Bolland, K. (2000). A synergistic effect of a daily supplement for 1 month of 200 mg magnesium plus 50 mg vitamin B6 for the relief of anxiety-related premenstrual symptoms: a randomized, double-blind, crossover study. *Journal of women's health & gender-based medicine*, 9(2), 131-139.

Bendich, A. (2000). The potential for dietary supplements to reduce premenstrual syndrome (PMS) symptoms. *Journal of the American college of nutrition*, 19(1), 3-12.

- **Relieves premenstrual mood changes**

Facchinetti, F., Borella, P., Sances, G., Fioroni, L., Nappi, R. E., & Genazzani, A. R. (1991). Oral magnesium successfully relieves premenstrual mood changes. *Obstetrics and gynecology*, 78(2), 177-181.

- **Reduces premenstrual water retention**

Walker, A. F., De Souza, M. C., Vickers, M. F., Abeyasekera, S., Collins, M. L., & Trinca, L. A. (1998). Magnesium supplementation alleviates premenstrual symptoms of fluid retention. *Journal of women's health*, 7(9), 1157-1165. <https://doi.org/10.1089/jwh.1998.7.1157>

- **Improves sleep**

Chollet, D., Franken, P., Raffin, Y., Henrotte, J. G., Widmer, J., Malafosse, A., & Tafti, M. (2001). Magnesium involvement in sleep: genetic and nutritional models. *Behavior genetics*, 31(5), 413-425. <https://doi.org/10.1023/a:1012790321071>

Held, K., Antonijevic, I. A., Künzel, H., Uhr, M., Wetter, T. C., Golly, I. C., Steiger, A., & Murck, H. (2002). Oral Mg(2+) supplementation reverses age-related neuroendocrine and sleep EEG

changes in humans. *Pharmacopsychiatry*, 35(4), 135–143. <https://doi.org/10.1055/s-2002-33195>

- **Lowers risk of developing diabetes**

Lopez-Ridaura, R., Willett, W. C., Rimm, E. B., Liu, S., Stampfer, M. J., Manson, J. E., & Hu, F. B. (2004). Magnesium intake and risk of type 2 diabetes in men and women. *Diabetes care*, 27(1), 134–140. <https://doi.org/10.2337/diacare.27.1.134>

Larsson, S. C., & Wolk, A. (2007). Magnesium intake and risk of type 2 diabetes: a meta-analysis. *Journal of internal medicine*, 262(2), 208–214. <https://doi.org/10.1111/j.1365-2796.2007.01840.x>

Rodríguez-Morán, M., Simental Mendía, L. E., Zambrano Galván, G., & Guerrero-Romero, F. (2011). The role of magnesium in type 2 diabetes: a brief based-clinical review. *Magnesium research*, 24(4), 156–162. <https://doi.org/10.1684/mrh.2011.0299>

Kim, D. J., Xun, P., Liu, K., Loria, C., Yokota, K., Jacobs, D. R., Jr, & He, K. (2010). Magnesium intake in relation to systemic inflammation, insulin resistance, and the incidence of diabetes. *Diabetes care*, 33(12), 2604–2610. <https://doi.org/10.2337/dc10-0994>

- **Reduces inflammation**

Nielsen F. H. (2014). Effects of magnesium depletion on inflammation in chronic disease. *Current opinion in clinical nutrition and metabolic care*, 17(6), 525–530. <https://doi.org/10.1097/MCO.0000000000000093>

Barbagallo, M., & Dominguez, L. J. (2010). Magnesium and aging. *Current pharmaceutical design*, 16(7), 832–839. <https://doi.org/10.2174/138161210790883679>

Nielsen F. H. (2010). Magnesium, inflammation, and obesity in chronic disease. *Nutrition reviews*, 68(6), 333–340. <https://doi.org/10.1111/j.1753-4887.2010.00293.x>

Nielsen, F. H., Johnson, L. K., & Zeng, H. (2010). Magnesium supplementation improves indicators of low magnesium status and inflammatory stress in adults older than 51 years with poor quality sleep. *Magnesium research*, 23(4), 158–168. <https://doi.org/10.1684/mrh.2010.0220>

Chacko, S. A., Sul, J., Song, Y., Li, X., LeBlanc, J., You, Y., Butch, A., & Liu, S. (2011). Magnesium supplementation, metabolic and inflammatory markers, and global genomic and proteomic profiling: a randomized, double-blind, controlled, crossover trial in overweight individuals. *The American journal of clinical nutrition*, 93(2), 463–473. <https://doi.org/10.3945/ajcn.110.002949>

Vitamin E:

- **Reduces cyclical breast pain**

Shobeiri, F., Oshvandi, K., & Nazari, M. (2015). Clinical effectiveness of vitamin E and vitamin B6 for improving pain severity in cyclic mastalgia. *Iranian journal of nursing and midwifery research*, 20(6), 723–727. <https://doi.org/10.4103/1735-9066.170003>

Pruthi, S., Wahner-Roedler, D. L., Torkelson, C. J., Cha, S. S., Thicke, L. S., Hazelton, J. H., & Bauer, B. A. (2010). Vitamin E and evening primrose oil for management of cyclical mastalgia: a randomized pilot study. *Alternative Medicine Review, 15*(1), 59.

Parsay, S., Olfati, F., & Nahidi, S. (2009). Therapeutic effects of vitamin E on cyclic mastalgia. *The breast journal, 15*(5), 510-514.

Shobeiri, F., Oshvandi, K., & Nazari, M. (2015). Clinical effectiveness of vitamin E and vitamin B6 for improving pain severity in cyclic mastalgia. *Iranian journal of nursing and midwifery research, 20*(6), 723–727. <https://doi.org/10.4103/1735-9066.170003>

- **Minimizes menstrual migraine**

Ziaei, S., Kazemnejad, A., & Sedighi, A. (2008). The effect of vitamin E on the treatment of menstrual migraine. *Medical Science Monitor, 15*(1), CR16-CR19.

- **Reduces period pains**

Kashanian, M., Lakeh, M. M., Ghasemi, A., & Noori, S. (2013). Evaluation of the effect of vitamin E on pelvic pain reduction in women suffering from primary dysmenorrhea. *The Journal of reproductive medicine, 58*(1-2), 34-38.

Ziaei, S., Zakeri, M., & Kazemnejad, A. (2005). A randomised controlled trial of vitamin E in the treatment of primary dysmenorrhoea. *BJOG: An International Journal of Obstetrics & Gynaecology, 112*(4), 466-469.

- **Reduces premenstrual syndrome**

Bendich, A. (2000). The potential for dietary supplements to reduce premenstrual syndrome (PMS) symptoms. *Journal of the American college of nutrition, 19*(1), 3-12.

- **Prevents aging and wrinkles**

Pandel, R., Poljšak, B., Godic, A., & Dahmane, R. (2013). Skin photoaging and the role of antioxidants in its prevention. *ISRN dermatology, 2013*, 930164. <https://doi.org/10.1155/2013/930164>

Packer, L., & Valacchi, G. (2002). Antioxidants and the response of skin to oxidative stress: vitamin E as a key indicator. *Skin pharmacology and applied skin physiology, 15*(5), 282–290. <https://doi.org/10.1159/000064531>

Packer, L., Weber, S. U., & Rimbach, G. (2001). Molecular aspects of alpha-tocotrienol antioxidant action and cell signalling. *The Journal of nutrition, 131*(2), 369S–73S. <https://doi.org/10.1093/jn/131.2.369S>

Boelsma, E., Hendriks, H. F., & Roza, L. (2001). Nutritional skin care: health effects of micronutrients and fatty acids. *The American journal of clinical nutrition, 73*(5), 853–864. <https://doi.org/10.1093/ajcn/73.5.853>

- **Helps reduce UV skin damage**

Burke, K. E., Clive, J., Combs, G. F., Jr, Commisso, J., Keen, C. L., & Nakamura, R. M. (2000). Effects of topical and oral vitamin E on pigmentation and skin cancer induced by ultraviolet

irradiation in Skh:2 hairless mice. *Nutrition and cancer*, 38(1), 87–97. https://doi.org/10.1207/S15327914NC381_13

Zinc:

- **Boosts mood**

Siahbazi, S., Behboudi-Gandevani, S., Moghaddam-Banaem, L., & Montazeri, A. (2017). Effect of zinc sulfate supplementation on premenstrual syndrome and health-related quality of life: Clinical randomized controlled trial. *Journal of Obstetrics and Gynaecology Research*, 43(5), 887-894.

- **Reduces period pains**

Eby, G. A. (2007). Zinc treatment prevents dysmenorrhea. *Medical Hypotheses*, 69(2), 297-301.

Sangestani, G., Khatiban, M., Marci, R., & Piva, I. (2015). The positive effects of zinc supplements on the improvement of primary dysmenorrhea and premenstrual symptoms: a double-blind, randomized, controlled trial. *Journal of Midwifery and Reproductive Health*, 3(3), 378-384.

Zekavat, O. R., Karimi, M. Y., Amanat, A., & Alipour, F. (2015). A randomised controlled trial of oral zinc sulphate for primary dysmenorrhoea in adolescent females. *Australian and New Zealand Journal of Obstetrics and Gynaecology*, 55(4), 369-373.

Teimoori, B., Ghasemi, M., Hoseini, Z. S., & Razavi, M. (2016). The Efficacy of Zinc Administration in the Treatment of Primary Dysmenorrhea. *Oman medical journal*, 31(2), 107–111. <https://doi.org/10.5001/omj.2016.21>

- **Reduces inflammation**

Bao, B., Prasad, A. S., Beck, F. W., Fitzgerald, J. T., Snell, D., Bao, G. W., Singh, T., & Cardozo, L. J. (2010). Zinc decreases C-reactive protein, lipid peroxidation, and inflammatory cytokines in elderly subjects: a potential implication of zinc as an atheroprotective agent. *The American journal of clinical nutrition*, 91(6), 1634–1641. <https://doi.org/10.3945/ajcn.2009.28836>

Prasad, A. S. (2014). Zinc is an antioxidant and anti-inflammatory agent: its role in human health. *Frontiers in nutrition*, 1, 14.

- **Helps treat acne**

Bae, Y. S., Hill, N. D., Bibi, Y., Dreiherr, J., & Cohen, A. D. (2010). Innovative uses for zinc in dermatology. *Dermatologic clinics*, 28(3), 587–597. <https://doi.org/10.1016/j.det.2010.03.006>

Rostami Mogaddam, M., Safavi Ardabili, N., Maleki, N., & Soflaee, M. (2014). Correlation between the severity and type of acne lesions with serum zinc levels in patients with acne vulgaris. *BioMed research international*, 2014, 474108. <https://doi.org/10.1155/2014/474108>

- **Supports wound healing process**

Momen-Heravi, M., Barahimi, E., Razzaghi, R., Bahmani, F., Gilasi, H. R., & Asemi, Z. (2017). The effects of zinc supplementation on wound healing and metabolic status in patients with

diabetic foot ulcer: A randomized, double-blind, placebo-controlled trial. *Wound repair and regeneration : official publication of the Wound Healing Society [and] the European Tissue Repair Society*, 25(3), 512–520. <https://doi.org/10.1111/wrr.12537>

Desneves, K. J., Todorovic, B. E., Cassar, A., & Crowe, T. C. (2005). Treatment with supplementary arginine, vitamin C and zinc in patients with pressure ulcers: a randomised controlled trial. *Clinical nutrition (Edinburgh, Scotland)*, 24(6), 979–987. <https://doi.org/10.1016/j.clnu.2005.06.011>

- **Keeps immune system strong**

Hemilä H. (2017). Zinc lozenges and the common cold: a meta-analysis comparing zinc acetate and zinc gluconate, and the role of zinc dosage. *JRSM open*, 8(5), 2054270417694291. <https://doi.org/10.1177/2054270417694291>

Haase, H., & Rink, L. (2009). The immune system and the impact of zinc during aging. *Immunity & ageing : I & A*, 6, 9. <https://doi.org/10.1186/1742-4933-6-9>

Flavonoids:

- **Reduce inflammation**

Guo, S., Ge, Y., & Na Jom, K. (2017). A review of phytochemistry, metabolite changes, and medicinal uses of the common sunflower seed and sprouts (*Helianthus annuus* L.). *Chemistry Central journal*, 11(1), 95. <https://doi.org/10.1186/s13065-017-0328-7>

Linoleic acid:

- **Lowers blood pressure**

Nunes, D. O., Marques, V. B., Almenara, C., Marcarini, W. D., Ribeiro Júnior, R. F., & Padilha, A. S. (2018). Linoleic acid reduces vascular reactivity and improves the vascular dysfunction of the small mesentery in hypertension. *The Journal of nutritional biochemistry*, 62, 18–27. <https://doi.org/10.1016/j.jnutbio.2018.07.016>

- **Helps lower cholesterol levels**

Richmond, K., Williams, S., Mann, J., Brown, R., & Chisholm, A. (2012). Markers of cardiovascular risk in postmenopausal women with type 2 diabetes are improved by the daily consumption of almonds or sunflower kernels: a feeding study. *ISRN nutrition*, 2013, 626414. <https://doi.org/10.5402/2013/626414>

Selenium:

- **Supports thyroid health**

Rayman, M. P., Thompson, A. J., Bekaert, B., Catterick, J., Galassini, R., Hall, E., Warren-Perry, M., & Beckett, G. J. (2008). Randomized controlled trial of the effect of selenium supplementation on thyroid function in the elderly in the United Kingdom. *The American journal of clinical nutrition*, 87(2), 370–378. <https://doi.org/10.1093/ajcn/87.2.370>

Ventura, M., Melo, M., & Carrilho, F. (2017). Selenium and Thyroid Disease: From Pathophysiology to Treatment. *International journal of endocrinology*, 2017, 1297658. <https://doi.org/10.1155/2017/1297658>

- **Fights oxidative stress**

Schnabel, R., Lubos, E., Messow, C. M., Sinning, C. R., Zeller, T., Wild, P. S., Peetz, D., Handy, D. E., Munzel, T., Loscalzo, J., Lackner, K. J., & Blankenberg, S. (2008). Selenium supplementation improves antioxidant capacity in vitro and in vivo in patients with coronary artery disease The SElenium Therapy in Coronary Artery disease Patients (SETCAP) Study. *American heart journal*, 156(6), 1201.e1–1201.e12011. <https://doi.org/10.1016/j.ahj.2008.09.004>

- **Lowers risk of certain cancers**

Puspitasari, I. M., Abdulah, R., Yamazaki, C., Kameo, S., Nakano, T., & Koyama, H. (2014). Updates on clinical studies of selenium supplementation in radiotherapy. *Radiation oncology (London, England)*, 9, 125. <https://doi.org/10.1186/1748-717X-9-125>

Cai, X., Wang, C., Yu, W., Fan, W., Wang, S., Shen, N., Wu, P., Li, X., & Wang, F. (2016). Selenium Exposure and Cancer Risk: an Updated Meta-analysis and Meta-regression. *Scientific reports*, 6, 19213. <https://doi.org/10.1038/srep19213>

- **Supports immune system**

Hoffmann, P. R., & Berry, M. J. (2008). The influence of selenium on immune responses. *Molecular nutrition & food research*, 52(11), 1273–1280. <https://doi.org/10.1002/mnfr.200700330>

Steinbrenner, H., Al-Quraishy, S., Dkhil, M. A., Wunderlich, F., & Sies, H. (2015). Dietary selenium in adjuvant therapy of viral and bacterial infections. *Advances in nutrition (Bethesda, Md.)*, 6(1), 73–82. <https://doi.org/10.3945/an.114.007575>