

## APPLICATIONS

- Women's Wellness Support
- Healthy Aging
- Mood Support
- Immune Support



## INTRODUCTION

Natural Boost is a comprehensive herbal formula designed to help maintain men's wellness and support healthy aging.\*

Epimedium leaf (*Epimedium grandiflorum*) belongs to the Berberidaceae family and includes flavonoids, polysaccharides, lignans, phenol glycosides, and sesquiterpenes, among others.<sup>1,2</sup> In traditional Chinese health practices, related Epimedium species known collectively as *yin yang huo* are used to support kidney yang, which encompasses healthy aging. Today, this support is attributed to the constituent flavonoids and polysaccharides.<sup>\*2</sup> Icarin, one of its flavonoids, may help maintain phosphodiesterase 5 (PDE-5) and testosterone levels already within the normal range.<sup>\*3</sup>

Tribulus fruit (*Tribulus terrestris*), also known as puncture vine, belongs to the Zygophyllaceae family.<sup>4</sup> It contains steroidal saponins such as spirostanol and furostanol; flavonoids such as quercetin and kaempferol; alkaloids such as tribulusamide C and tribulusterine; tannins; terpenoids; and polyphenols; among others.<sup>5,6</sup>

Tribulus fruit may help maintain normal fertility by supporting the central nervous system and the anterior pituitary gland, as well as maintaining gonadal hormones and their receptors, already within the normal range.<sup>\*7</sup> Tribulus fruit has been used for centuries in both Chinese traditional health practices, where it is known as *ci ji li*, and traditional Ayurvedic health practices, where it is known as Gokshura.<sup>\*8,5</sup>

L-arginine HCl is an essential amino acid needed for protein synthesis, specifically for nitric oxide synthase (NOS).<sup>\*9,10</sup>

Jatropha stem (*Jatropha macrantha*) belongs to the Euphorbiaceae family, and is also known as Huanarpo macho.<sup>11,12</sup> It has been used in traditional Peruvian

health practices for both men's and women's wellness.<sup>\*13</sup> Its contents include flavonoids, phenolic acids, lignans, coumarins, and terpenes, among others.<sup>12</sup>

Muira Puama bark (*Ptychopetalum olacoides*) belongs to the Olacaceae family and is native to the Amazon region, where it is used in traditional health practices to support healthy aging, maintain brain health, and support healthy stress management.<sup>\*14</sup> This support is attributed to its alkaloids,<sup>15</sup> including magnoflorine and menispermine; it also includes the triterpenoid lupeol.<sup>16</sup> In traditional use, it is used as an adaptogen to support mental, physical, and sexual wellness regardless of age.<sup>\*17</sup>

Maca root (*Lepidium meyenii*) belongs to the Brassicaceae family and is native to the Peruvian Andes.<sup>13,18</sup> It is sometimes called Peruvian ginseng (though it is not a true ginseng) and may support healthy aging,<sup>18,19</sup> attributed to the constituent macamides and glucosinolates.<sup>\*19</sup> Maca root has been used traditionally to support healthy sexual function and maintain healthy fertility.<sup>\*13</sup>

Ginkgo leaf (*Ginkgo biloba*) belongs to the Ginkgoaceae family and contains flavonoids, terpenoids, and organic acids. It has been used in traditional Chinese health practices, where it is known as *yin xing ye*, since the 16th century.<sup>\*20</sup>

Eurycoma root (*Eurycoma longifolia*) belongs to the Simaroubaceae family and its primary constituents include ellagic acid, quercetin, and rutin; quassinoids such as eurycomanone; and alkaloids.<sup>21,22</sup> It has been used in the traditional health practices of Southeast Asian countries to support sexual wellness and healthy stress management.<sup>\*23</sup>

Eustephia bark (*Eustephia coccinea*) belongs to the Amaryllidaceae family and is used in the traditional health practices of Peru.<sup>24</sup>

Saffron pistil (*Crocus sativus*) belongs to the Iridaceae family and its main constituents include crocin, picrocrocin and safranal.<sup>25</sup> It is used in traditional health practices as well as cooking.<sup>\*26</sup>

## MEN'S WELLNESS

### Healthy Sexual Function

Epimedium leaf (*E. grandiflorum*) contains icariin, a component that has been shown in rat studies to support healthy sexual function though maintaining endothelial nitric oxide synthetase (eNOS) already within the normal range.<sup>27</sup> According to in vitro studies, it may also help maintain levels of PDE-5 already within the normal range.<sup>\*28</sup>

Tribulus fruit (*T. terrestris*) may help support healthy sexual function, as seen in a 12-week randomized controlled trial.<sup>\*29</sup> The mechanism is thought to be maintenance of eNOS already within the normal range and corresponding effects on the corpus cavernosum epithelium.<sup>\*30</sup>

L-arginine is an amino acid used in protein synthesis that may help maintain levels of nitric oxide (NO) already within the normal range, supporting normal sexual function.<sup>\*31</sup> In two randomized controlled trials with over 100 participants each, L-arginine supplementation helped maintain healthy sexual function, compared with placebo.<sup>\*32,33</sup>

Jatropha stem (*J. macrantha*) may help maintain nitric oxide already within the normal range and support normal sexual function, as seen in rat studies.<sup>\*12</sup> Muira Puama bark, in a combination formula taken twice daily for three months, helped support healthy sexual function, according to a standardized scale.<sup>\*34</sup>

Eurycoma root (*E. longifolia*) may help support healthy sexual function. In a randomized controlled trial, 45 healthy older men were randomly assigned to one of four groups: control + placebo, control + Eurycoma root, exercise + placebo, or exercise + Eurycoma root, daily for six months. While all of the intervention groups experienced some support, the exercise + Eurycoma root group experienced the most support in maintaining testosterone levels already within the normal range and supporting healthy sexual function.<sup>\*35</sup> Eurycoma root may help to maintain PDE-5 enzyme levels as well as aromatase-mediated estrogen levels already within the normal range.<sup>\*21,23,4</sup>

Saffron pistil (*C. sativus*) may help maintain normal sexual function, according to a four-week randomized controlled trial with 36 men.<sup>\*36</sup> A meta-analysis of six trials found similar evidence for healthy sexual function support.<sup>\*37</sup>

### Normal Fertility

Epimedium leaf (*E. grandiflorum*) may help maintain a healthy epididymal sperm count already within the normal range, compared to control, as found in rat studies.<sup>\*38</sup>

Tribulus fruit (*T. terrestris*) may help support healthy male fertility through maintaining spermatogenesis already within the normal range.<sup>\*6</sup> In a systematic review of seven human studies, six studies found Tribulus fruit to support normal fertility, helping maintain sperm count, motility, and morphology already within the normal range.<sup>\*39</sup>

Maca root (*L. meyenii*) may support normal sperm motility and help maintain sperm concentration already within the normal range, according to a systematic review and meta-analysis of five randomized, controlled trials.<sup>\*40</sup> A very small clinical study with nine healthy men taking maca root for four months found that maca helped maintain normal sperm count, sperm motility, and seminal volume, already within the normal range,<sup>\*41</sup> though a larger double-blind placebo-controlled study with 69 men found evidence for only sperm concentration support.<sup>\*42</sup>

Eurycoma root (*E. longifolia*), in a meta-analysis of two studies with a total of 139 participants, was found to support healthy sexual function in some men, though not all.<sup>\*43</sup> The quassinoid eurycomanone may maintain health sperm quality already within the normal range.<sup>\*4</sup>

### Hormonal Support

Epimedium leaf (*E. grandiflorum*) may help maintain normal testosterone levels already within the normal range, as found in rat studies.<sup>\*38</sup> While a randomized, single-blind placebo-controlled study suggested that Tribulus fruit supplementation for six weeks may help maintain testosterone levels already within the normal range in humans,<sup>\*44</sup> the evidence is mixed.<sup>\*45,46</sup>

L-arginine supplementation, according to a randomized controlled trial with 108 male participants, may help maintain testosterone levels already within the normal range.<sup>\*32</sup> Jatropha stem (*J. macrantha*) combined with Maca root (*L. meyenii*), according to a study with mice, may help maintain testosterone levels already within the normal range, attributed to the component saponins; human studies are needed.<sup>\*13</sup>

Eurycoma root (*E. longifolia*), according to a meta-analysis of nine studies, five of which were randomized, controlled trials, may help maintain testosterone levels already within the normal range.<sup>\*47</sup> In a randomized, controlled trial, 32 men were randomly assigned to Eurycoma root or a placebo for two weeks. Compared to the placebo, the Eurycoma root group experienced significant support for maintaining testosterone levels already within the normal range, though without evidence of support for maintaining luteinizing hormone (LH), follicle-stimulating hormone (FSH), or sex hormone binding globulin (SHBG) already within the normal range.<sup>\*48</sup>

## HEALTHY AGING

### Cardiovascular Support

Tribulus fruit (*T. terrestris*) may help maintain angiotensin-converting enzyme (ACE) already within the normal range,<sup>\*49</sup> as well as healthy blood pressure already within the normal range.<sup>\*8</sup> L-arginine may be converted to nitric oxide, supporting vasodilation and maintaining normal blood flow.<sup>\*31</sup> It may also help maintain healthy systolic and diastolic blood pressure already within the normal range, according to a review of meta-analyses.<sup>\*9</sup> Ginkgo leaf (*G. biloba*) may help support cardiovascular health by maintaining insulin sensitivity and a healthy insulin response, already within the normal range.<sup>\*50</sup>

Saffron pistil (*C. sativus*), according to meta-analysis of ten studies with 622 participants, may help maintain diastolic blood pressure already within the normal range.<sup>\*51</sup> It may also, according to a meta-analysis of nine studies with 595 participants, help maintain waist circumference and fasting blood glucose levels already within the normal range.<sup>\*52</sup> Another meta-analysis of 25 randomized, controlled trials also found that Saffron pistil may help maintain fasting blood glucose already within the normal range, though a decrease in waist circumference was non-significant.<sup>\*53</sup>

### Cognitive Support

Muira Puama bark (*P. olacoides*), according to mouse studies, may support memory and cognition through maintaining acetylcholinesterase (AChE) levels already within the normal range, though human studies are needed.<sup>\*14,54</sup> Mouse studies have also shown that Muira Puama bark ethanol extract may help maintain levels of A-beta already within the normal range.<sup>\*54</sup>

Ginkgo leaf (*G. biloba*), according to one randomized, controlled trial, may help with neurocognitive support by maintaining brain-derived neurotrophic factor (BDNF) levels already within the normal range.<sup>\*55</sup> Another study found that ginkgo may help maintain cerebral blood flow already within the normal range.<sup>\*56</sup>

### Bone Support

Eurycoma root (*E. longifolia*) may help support healthy bone density, maintaining bone calcium levels already within the normal range during healthy aging.<sup>\*23</sup> The constituent eurypeptides may help maintain DHEA already within the normal range, which may help maintain sex hormones such as testosterone already within the normal range.<sup>\*23</sup>

## OTHER

### Mood and Sleep Support

According to a meta-analysis of nine randomized trials, Saffron pistil (*C. sativus*) may help maintain a healthy mood.<sup>\*57</sup> According to a meta-analysis of 21 randomized trials, saffron pistil may help maintain both mood and sleep already within the normal range.<sup>\*58</sup> Other meta-analyses suggest that saffron pistil may help maintain healthy sleep duration and normal sleep quality.<sup>\*59,60</sup>

### Immune Support

Eurycoma root (*E. longifolia*), according to a four-week randomized, controlled trial with 126 middle-aged adults, may help maintain total, naïve, and CD4+ T cell numbers already within the normal range.<sup>\*61</sup>

## SAFETY AND CAUTIONS

Epimedium leaf (*E. grandiflorum*) is generally well tolerated,<sup>\*41,45,46</sup> and animal studies have not shown toxicity.<sup>\*2</sup> Side effects may include dizziness, dry mouth, or thirst.<sup>\*45</sup> Theoretically, Epimedium leaf may increase the risk of bleeding when taken with anticoagulant or antiplatelet medications.<sup>\*45</sup>

**Tribulus fruit** (*T. terrestris*) is generally well tolerated.<sup>47-49</sup> Tribulus fruit should be avoided in pregnancy as it has affected fetal development in animal studies.<sup>47</sup> It may increase the levels and adverse effects of lithium when taken concurrently.<sup>47</sup>

**Jatropha stem** (*J. macrantha*) has a long history of safe use in traditional health practices and is generally well tolerated.<sup>12</sup> There are no currently known interactions with pharmaceuticals.

**Muirapuama bark** (*P. olacoides*) is generally well tolerated. In one mouse study, it had additive effects with diazepam.<sup>50</sup> While there are no known adverse effects or drug interactions in humans,<sup>15</sup> it is worth noting that molecular docking studies have shown that eight compounds in Muirapuama bark may bind to estrogen receptors, resulting in selective estrogen receptor modulation,<sup>51</sup> and caution may be warranted in those with estrogen-sensitive conditions.

**Maca root** (*L. meyenii*) is generally well tolerated and has been used for centuries to support sexual function. No adverse events have been reported in clinical trials,<sup>18,52</sup> and there are no currently known interactions in humans.<sup>52</sup>

**Eurycoma root** (*E. longifolia*) is generally well tolerated and shows little inhibition of CYP isoenzymes, making CYP-related drug interactions unlikely.<sup>21</sup> Due to potential effects on estrogen levels, it should be avoided in those with estrogen receptor-positive breast cancer.<sup>21</sup> It may reduce the levels and effectiveness of propranolol.<sup>21,53</sup>

**Eustephia bark** (*E. coccinea*) has a long history of safe use in traditional Peruvian medicine, though information is limited.<sup>22</sup>

**NutraMedix** 

**KEEP OUT OF REACH OF CHILDREN**

**STORAGE:** Keep tightly closed in a dry place at room temperature. (59-86°F or 15-30°C)

**SHAKE WELL BEFORE EACH USE:**  
Take 30 drops twice daily. Can be taken under the tongue or in 2-4 oz. (60-120 mL) of water. Do not use if pregnant or nursing. Stop use if adverse reactions develop.

**NutraMedix**   
Jupiter, Florida 33458 USA  
www.nutramedix.com  
561-745-2917 

**NATURAL BOOST FOR MEN**

**Dietary Supplement**  
2 oz. (60 mL)

**Supplement Facts**  
Serving Size: 30 drops  
Servings Per Container: 40

Amount Per Serving	% DV
Proprietary Blend	1.5mL*
Epimedium leaf extract, Tribulus fruit extract, L-Arginine HCl, <i>Jatropha macrantha</i> stem extract, Muirapuama bark extract, Maca root extract, Ginkgo leaf extract, <i>Eurycoma longifolia</i> root extract, <i>Eustephia coccinea</i> bark extract, Saffron pistil extract.	

\*Daily Value not established  
Other ingredients: mineral water, ethanol (20-24%)

7  28650 05808 9 Lot # Exp. V304865

## REFERENCES

- <sup>1</sup> Tan, H. L., Chan, K. G., et al. (2016). *Frontiers in Pharmacology*, 7, 191.
- <sup>2</sup> Ma, H., He, X., et al. (2011). *Journal of Ethnopharmacology*, 134(3), 519–541.
- <sup>3</sup> Niu, Y., Lin, G., et al. (2022). *Translational Andrology and Urology*, 11(7), 1007–1022.
- <sup>4</sup> Abarikwu, S. O., Onuah, C. L., & Singh, S. K. (2020). *Andrologia*, 52(3), e13509.
- <sup>5</sup> Ștefănescu, R., Tero-Vescan, A., et al. (2020). *Biomolecules*, 10(5), 752.
- <sup>6</sup> Zhu, W., Du, Y., et al. (2017). *Chemistry Central Journal*, 11(1), 60.
- <sup>7</sup> Sirotkin, A. V., & Kolesárová, A. (2021). *Physiological Research*, 70(Suppl4), S657–S667.
- <sup>8</sup> Chhatre, S., Nesari, T., et al. (2014). *Pharmacognosy Reviews*, 8(15), 45–51.
- <sup>9</sup> McRae, M. P. (2016). *Journal of Chiropractic Medicine*, 15(3), 184–189.
- <sup>10</sup> Natural Medicines. (2021, October 13). L-Arginine [monograph]. <http://naturalmedicines.therapeuticresearch.com>
- <sup>11</sup> Apaza T, L., Antognoni, F., et al. (2021). *Natural Product Research*, 35(24), 5843–5847.
- <sup>12</sup> Tinco-Jayo, J. A., Aguilar-Felices, E. J., et al. (2021). *Molecules*, 27(1), 115.
- <sup>13</sup> Oshima, M., Gu, Y., & Tsukada, S. (2003). *The Journal of Veterinary Medical Science*, 65(10), 1145–1146.
- <sup>14</sup> da Silva, A. L., Silva Martins, B. D., et al. (2009). *Psychopharmacology*, 202(1-3), 165–172.
- <sup>15</sup> Tian, X., Guo, S., et al. (2018). *Natural Product Research*, 32(3), 354–357.
- <sup>16</sup> Natural Medicines. (2020, September 22). Muira Puama [monograph]. <http://naturalmedicines.therapeuticresearch.com>
- <sup>17</sup> Piato, A. L., Detanico, B. C., et al. (2010). *Phytomedicine: International journal of phytotherapy and phytopharmacology*, 17(3-4), 248–253.
- <sup>18</sup> Shin, B. C., Lee, M. S., et al. (2010). *BMC Complementary and Alternative Medicine*, 10, 44.
- <sup>19</sup> Beharry, S., & Heinrich, M. (2018). *Journal of Ethnopharmacology*, 211, 126–170.
- <sup>20</sup> Eastland Herb. (2018). Eastland Herb - Chinese herbal medicine: Materia medica and formula & strategies (4.3). [mobile app]. App store. <https://apps.apple.com/us/app/eastland-herb-chinese-medicine/id737380894>.
- <sup>21</sup> Ganapathy, A., Hari Priya, V. M., & Kumaran, A. (2021). *Journal of Ethnopharmacology*, 267, 113536.
- <sup>22</sup> George, A., & Henkel, R. (2014). *Andrologia*, 46(7), 708–721.
- <sup>23</sup> Rehman, S. U., Choe, K., & Yoo, H. H. (2016). *Molecules*, 21(3), 331.
- <sup>24</sup> Bussmann, R. W., & Glenn, A. (2010). *Journal of Ethnobiology and Ethnomedicine*, 6, 30.
- <sup>25</sup> Khazdair, M. R., Boskabady, M. H., et al. (2015). *Avicenna Journal of Phytomedicine*, 5(5), 376–391.
- <sup>26</sup> Natural Medicines. (2022, September 6). Saffron [monograph]. <http://naturalmedicines.therapeuticresearch.com>
- <sup>27</sup> Liu, Q. W., Yang, Z. H., et al. (2021). *Andrology*, 9(1), 342–351.
- <sup>28</sup> Chau, Y., Li, F. S., Levsh, O., & Weng, J. K. (2019). *PLoS One*, 14(9), e0222803.
- <sup>29</sup> Kamenov, Z., Fileva, S., et al. (2017). *Maturitas*, 99, 20–26.
- <sup>30</sup> Do, J., Choi, S., et al. (2013). *Korean Journal of Urology*, 54, 183–188.
- <sup>31</sup> Maccallini, C., & Amoroso, R. (2022). *Molecules*, 27(20), 6820.
- <sup>32</sup> El Taieb, M., Hegazy, E., & Ibrahim, A. (2019). *The Journal of Sexual Medicine*, 16(9), 1390–1397.
- <sup>33</sup> Abu El-Hamd, M., & Hegazy, E. M. (2020). *Andrologia*, 52(7), e13640.
- <sup>34</sup> Nguyen, S., Rajfer, J., & Shaheen, M. (2018). *Translational Andrology and Urology*, 7(2), 266–273.
- <sup>35</sup> Leitão, A. E., Vieira, M., et al. (2021). *Maturitas*, 145, 78–85.
- <sup>36</sup> Modabbernia, A., Sohrabi, H., et al. (2012). *Psychopharmacology*, 223(4), 381–388.
- <sup>37</sup> Maleki-Saghooni, N., Mirzaei, K., et al. (2018). *Avicenna Journal of Phytomedicine*, 8(3), 198–209.
- <sup>38</sup> Chen, M., Hao, J., et al. (2014). *Molecules*, 19(7), 9502–9514.
- <sup>39</sup> Sanagoo, S., Sadeghzadeh Oskouei, B., et al. (2019). *Complementary Therapies in Medicine*, 42, 95–103.
- <sup>40</sup> Lee, H. W., Lee, M. S., et al. (2022). *Frontiers in Pharmacology*, 13, 934740.
- <sup>41</sup> Gonzales, G. F., Cordova, A., et al. (2001). *Asian Journal of Andrology*, 3(4), 301–303.
- <sup>42</sup> Alcalde, A. M., & Rabasa, J. (2020). *Andrologia*, 52(10), e13755.
- <sup>43</sup> Kotirum, S., Ismail, S. B., & Chaiyakunapruk, N. (2015). *Complementary Therapies in Medicine*, 23(5), 693–698.
- <sup>44</sup> Fernández-Lázaro, D., Mielgo-Ayuso, J., et al. (2021). *Nutrients*, 13(11), 3969.
- <sup>45</sup> Santos, H. O., Howell, S., & Teixeira, F. J. (2019). *Journal of Ethnopharmacology*, 235, 392–405.
- <sup>46</sup> Kovac, J. R., Pan, M., et al. (2016). *American Journal of Men's Health*, 10(6), NP109–NP117.
- <sup>47</sup> Leisegang, K., Finelli, R., et al. (2022). *Medicina*, 58(8), 1047.
- <sup>48</sup> Chan, K. Q., Stewart, C., et al. (2021). *Andrologia*, 53(4), e14001.
- <sup>49</sup> Kamrani Rad, S. Z., Javadi, B., et al. (2019). *Avicenna Journal of Phytomedicine*, 9(4), 291–309.
- <sup>50</sup> Siegel, G., Ermilov, E., et al. (2014). *Atherosclerosis*, 237(2), 584–588.
- <sup>51</sup> Pourmasoumi, M., Hadi, A., et al. (2019). *Pharmacological Research*, 139, 348–359.
- <sup>52</sup> Rahmani, J., Bazmi, E., et al. (2020). *Complementary Therapies in Medicine*, 49, 102298.
- <sup>53</sup> Tahmasbi, F., Araj-Khodaei, M., et al. (2022). *Phytotherapy Research: PTR*, 36(9), 3394–3414.
- <sup>54</sup> Figueiró, M., Ilha, J., et al. (2011). *Phytomedicine: International journal of phytotherapy and phytopharmacology*, 18(4), 327–333.
- <sup>55</sup> Sadowska-Krepa, E., Klapińska, B., et al. (2017). *Nutrients*, 9(8), 803.
- <sup>56</sup> Mashayekh, A., Pham, D. L., et al. (2011). *Neuroradiology*, 53(3), 185–191.
- <sup>57</sup> Tóth, B., Hegyi, P., et al. (2019). *Planta Medica*, 85(1), 24–31.
- <sup>58</sup> Ghaderi, A., Asbaghi, O., et al. (2020). *Complementary Therapies in Medicine*, 48, 102250.
- <sup>59</sup> Lian, J., Zhong, Y., et al. (2022). *Sleep Medicine*, 92, 24–33.
- <sup>60</sup> Munirah, M. P., Norhayati, M. N., & Noraini, M. (2022). *International Journal of Environmental Research and Public Health*, 19(18), 11658.
- <sup>61</sup> George, A., Suzuki, N., et al. (2016). *Phytotherapy Research: PTR*, 30(4), 627–635.
- <sup>62</sup> Natural Medicines. (2021, August 26). Horny Goat Weed [monograph]. <http://naturalmedicines.therapeuticresearch.com>
- <sup>63</sup> Natural Medicines. (2022, July 11). Tribulus [monograph]. <http://naturalmedicines.therapeuticresearch.com>
- <sup>64</sup> Brunetti, P., Lo Faro, A. F., et al. (2020). *Pharmaceuticals*, 13(10), 309.
- <sup>65</sup> Powers, C. N., & Setzer, W. N. (2015). *In Silico Pharmacology*, 3, 4.
- <sup>66</sup> Natural Medicines. (2022, July 11). Maca [monograph]. <http://naturalmedicines.therapeuticresearch.com>
- <sup>67</sup> Natural Medicines. (2022, August 2). Ginkgo [monograph]. <http://naturalmedicines.therapeuticresearch.com>
- <sup>68</sup> Natural Medicines. (2022, September 29). Eurycoma Longifolia [monograph]. <http://naturalmedicines.therapeuticresearch.com>