

# HormoneGenic

Hormone Balance & Metabolism Support

**Alimentum Labs**

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# HormoneGenic

## Hormone Balance & Metabolism Support

HormoneGenic delivers phytonutrients that balance and vitalize the endocrine system, supporting healthy hormone function and metabolism through a science-backed formula based on clinical research and endocrine pathway genetics.



Hormone



Metabolism



Detox



Cardio

## Health Indications

- Balance Male and Female Hormones
- Relieve Menopause-Related Symptoms
- Protect Bone Health
- Improve Menstrual Pain
- Support Male and Female Fertility
- Improve Mental Health Symptoms related to PMS or Menopause
- Mitigate Prostate Inflammation

## Instructions For Use

Take 2 capsules daily with food, or as directed by your health care provider.

\*\*Individual needs may vary; please consult your practitioner before altering the prescribed doses or protocols.

## Product Description

Hormones are chemical messengers produced by glands and other tissues in the body that coordinate numerous systems and processes to support whole-body health. HormoneGenic focuses primarily on sex hormones, which are essential for developing and maintaining reproductive health in both men and women. Equally important, sex hormones play a critical role in maintaining neurocognitive, cardiovascular, musculoskeletal, and metabolic health. While there are multiple forms of these hormones, they are typically grouped into three general categories: estrogens, progestogens, and androgens. All humans produce these hormones at some level, the key difference is in the ratios at which these hormones are produced in the body. Men tend to have higher levels of circulating androgens, while women tend to have much higher levels of circulating estrogens and progestogens.



The production and regulation of these hormones is an intricate and complicated process that can become impaired and lead to hormone imbalances. These imbalances can exhibit symptoms at any point, but can become particularly troublesome during certain phases of the menstrual cycle and during the transitional period of menopause. Hormone imbalances in women can lead to infertility, heavy and painful periods, ovarian cysts, metabolic changes, irritability, fatigue, mood swings, cognitive decline, cardiovascular disease, osteoporosis, sexual dysfunction, cancer, and more. Similarly, men may experience infertility, fatigue, mood changes, cognitive decline, cardiovascular disease, sexual dysfunction, and cancer. Various factors can contribute to these imbalances, including poor genetics, extreme stress, other diseases, and exposure to toxins such as Bisphenol A (BPA), Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS), phthalates, microplastics, and other harmful substances that mimic hormones.

Regardless of the cause or symptoms of hormonal imbalances, HormoneGenic contains ingredients specifically targeted to address these issues. Alimentum Labs has sourced clinically proven ingredients to create a diverse blend of herbs and amino acids that supports hormone regulation. HormoneGenic is a premium choice for managing sex hormone regulation and related concerns, including symptoms due to aging, hormonal transitions, or endocrine-disrupting chemical exposure. This sophisticated formula may also help address issues such as infertility, fatigue, mood changes, metabolic changes, pain, menstrual cycle irregularities, insomnia, sexual dysfunction, cancer and more.





## Key Elements and Features of HormoneGenic

### Regulate Hormones

Adaptogens provided by HormoneGenic help regulate hormones by providing essential nutrients and bioactive compounds that support the body's endocrine system. HormoneGenic's herbal extracts and amino acids can influence hormone production and balance. By enhancing the body's nutritional status and supporting the function of various glands, this powerful herbalomic blend promotes a more balanced hormone profile and aims to improve symptoms related to hormonal imbalances, such as mood swings, fatigue, and reproductive health issues.

### Support Hormonal Transitions

HormoneGenic can significantly aid in managing hormonal transitions, such as menopause and phases of the menstrual cycle, by providing targeted nutrients that alleviate symptoms and support overall hormonal health. During menopause, the decline in estrogen and progesterone levels can lead to symptoms like hot flashes, mood swings, and bone density loss. HormoneGenic contains a rich variety of herbs that support and balance hormone levels, addressing symptoms related to unbalanced hormones. By bridging nutritional gaps and stabilizing hormonal fluctuations during these transitions, Alimentum Labs' HormoneGenic offers a natural and effective approach to managing symptoms and enhancing well-being during transitional phases.

## Protect Fertility

The orchestration of multiple hormones and physiological responses is critical for fertility. Dysregulation of hormones, for any reason, can lead to poor fertility outcomes that can be devastating to individuals and their families. HormoneGenic's research-backed blend of herbalomic ingredients can help support and protect fertility, which is of particular importance in a world increasingly contaminated with endocrine-disrupting chemicals.



## Gene Spotlight

The genes that control the production, regulation, and function of hormones are numerous, and the web of processes is incredibly complex. Below is a list and explanation of a few critical genes involved in regulating sex hormones, which are supported by the safe, natural ingredients provided by HormoneGenic. These ingredients help regulate hormones by influencing the expression of multiple genes and supporting other pathways, minimizing the side effects and risks often associated with pharmaceutical medications.

## Genetic Interactions

### ***STAR* (Steroidogenic Acute Regulatory) Gene**

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All sex hormones are derived from cholesterol molecules. The *STAR* gene encodes a protein that facilitates the transport of cholesterol to the outer mitochondrial membrane where it works with other proteins to bind and transport cholesterol into the mitochondrial matrix. Once in the matrix, cholesterol can then be modified into sex hormones.<sup>1</sup>

### ***CYP11A* (Cytochrome P450 Family 11 Subfamily A) Gene**

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The *CYP11A* gene encodes a protein that metabolizes cholesterol into pregnenolone once it reaches the mitochondrial matrix. This is the first step in converting cholesterol into all the different sex hormones.<sup>2</sup>

### ***CYP17A1* (Cytochrome P450 Family 17 Subfamily A Member 1) Gene**

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The *CYP17A1* gene helps further convert cholesterol into various steroid hormones by modifying pregnenolone. This process leads to the production of dehydroepiandrosterone (DHEA), dehydroepiandrosterone sulfate (DHEAS), testosterone, estradiol, and cortisol.<sup>3</sup>

### ***CYP19A1* (Cytochrome P450 Family 19 Subfamily A Member 1) Gene**

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The *CYP19A1* gene encodes an enzyme known as the estrogen aromatase enzyme. It is critical for the last step in the conversion of testosterone into estrogens. Due to its crucial role in the production and regulation of estrogens, it is particularly important for regulating hormone imbalances.<sup>4</sup>

### ***ESR* (Estrogen Receptor) Genes**

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The estrogen receptor 1 (*ESR1*) and estrogen receptor 2 (*ESR2*) genes encode receptor proteins that allow tissues to respond to the hormone estrogen. When estrogen binds to these receptors, it activates the expression of reporter genes containing estrogen response elements (EREs). These EREs help amplify the effects of estrogen and activate other genes and biological processes in the body such as bone development, protection of heart and brain health, support for female reproductive organs, and more.<sup>5,6</sup>

### ***PPAR* (Peroxisome Proliferator-Activated Receptor) Genes**

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PPAR genes are a family of genes that encode ligand transcription factors. These transcription factors regulate the expression of other genes involved in various physiological functions, including hormone production, regulation, and response.<sup>7</sup>



## How HormoneGenic Works

HormoneGenic aims to regulate sex hormones through safe, clinically proven, natural ingredients. This formula uses a combination of both familiar and lesser-known ingredients to target unbalanced hormones from multiple pathways. HormoneGenic was designed to balance hormones at any phase of life, for both males and females, and address a wide range of disruptive symptoms.





## Key Ingredients

### *Rheum rhaponticum* (ext)

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*R. rhaponticum*, also known as false rhubarb, is a plant native to Europe that is widely used for managing menopause symptoms. ERr 731 is the named and standardized extract from this plant that is used in various natural menopause support products, such as Estrovera®. Clinical studies have shown that ERr 731, and other *R. rhaponticum* extracts, effectively relieves menopause symptoms like hot flashes, insomnia, night sweats, low energy, and irritability.<sup>8,9</sup> Research suggests that these powerful effects are due to its ability to interact with estrogen receptors.<sup>10</sup>

### *Indole-3-carbinol*

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Indole-3-carbinol (I3C) is a powerful phytochemical found in cruciferous vegetables such as broccoli, cauliflower, kale, and Brussels sprouts. It has long been recognized for its ability to regulate estrogenic effects on tissues and organs.<sup>11</sup> I3C has the ability to increase the expression of the CYP1A1 gene, which codes for an enzyme that converts estrone to 2-hydroxyestrone; 2-hydroxyestrone has been shown to be protective against estrogen-dependent cancers.<sup>12</sup> Additionally, I3C also helps to downregulate genes such as pS2 and cathepsin-D which are activated by estrogen receptors.<sup>13</sup> Alternatively, I3C works alongside BRCA-1, a tumor suppressor, to mitigate the effect of estrogen receptor-related expression, thereby helping to reduce the development of cancerous tumors.<sup>14</sup> Through these effects, I3C may help avoid the development of estrogen-dependent cancers and counteract as the body-wide effects of estrogen dominance.

### Diindolylmethane

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Diindolylmethane (DIM) is a derivative of indole-3-carbinol and may be even more potent than I3C in its ability to protect against estrogen-dependent cancers. It has been reported that DIM inhibits cellular growth when DNA damage has occurred, thereby mitigating the risk of developing cancers.<sup>11</sup> Like I3C, DIM works in conjunction with the BRCA-1 to suppress tumor growth.<sup>14</sup> Additionally, DIM provides a strong protection against prostate cancer cells and has been used as an adjunctive treatment alongside primary prostate cancer therapies.<sup>15</sup>

### Hops (ext) (*Humulus lupulus*)

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The hops plant, scientifically known as *Humulus lupulus* L., has been used throughout much of human history as an herbal remedy, but it is most commonly known for its role in producing beer. While beer itself has many undesirable health effects, the hops plant offers numerous health benefits. Studies indicate that hops can protect against a wide variety of cancers, including hormone-dependent cancers. Additionally, hops leaves have been used to help manage painful periods, and the humulone compound in hops is known for its ability to improve or even reverse insomnia, a common and disruptive symptom of menopause.<sup>16,17</sup>

### *Angelica gigas* Nakai (ext)

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*A. gigas* is an important plant used in traditional medicine in China, Korea, and other Asian countries. Historically, it has been used to manage hormone imbalances in women. More recent research has shown that it effectively protects against osteoporosis, a common and problematic side effect of menopause.<sup>18</sup> It has also been shown to boost sperm production through a suspected interaction with the *STAR* gene.<sup>19</sup>

### ***Angelica sinensis*** (ext)

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*A. sinensis*, commonly known as female ginseng, is a powerful herb native to East Asia. Recent data shows that consumption of *A. sinensis* prevents osteoporosis to the same efficacy as estrogen replacement therapy.<sup>20</sup> It helps to protect bone health by upregulating the expression of the *PPAR $\gamma$*  gene and downregulating the expression of *iNOS*, *SOD* and *CAT* genes.<sup>21</sup> It has also been shown to promote the production of red blood cells and platelets, which can be particularly beneficial for those who suffer from heavy menstrual periods.<sup>22</sup> Recent research suggests that *A. sinensis* can regulate the healthy expression of *CYP17A1* and *CYP19A1*, which may help prevent the hyperandrogenism symptoms associated with polycystic ovarian syndrome (PCOS).<sup>23</sup>

### ***Schisandra chinensis*** (ft)

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In a double-blind, placebo-controlled study, *S. chinensis* significantly improved symptoms associated with menopause, such as hot flashes, sweating, and heart palpitations.<sup>24</sup> Some studies suggest that this herb may be beneficial for erectile dysfunction for men who do not respond to, or want to avoid, mainstream treatment options.<sup>25</sup> A compound found in *S. chinensis* known as gomisin, increases the expression of the *CYP11A1* and *CYP17A1* genes and proteins. This upregulation can lead to an increase in testosterone and estradiol due to the increased amounts of their precursor molecules.<sup>26,27</sup>

### **Chrysin**

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Chrysin is a natural polyphenol found in fruit, honey, and bee propolis. It modulates hormone production by inhibiting the aromatase enzyme that converts androgens into estrogens. Powerful benefits, such as alleviating symptoms related to benign prostate hyperplasia (BPH) and supporting the treatment of estrogen-dependent diseases, have been observed.<sup>28,29</sup> It has also been shown to improve depressive symptoms associated with hypothyroidism.<sup>30</sup>

***Cynanchum wilfordii***  
**(ext)**

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*C. wilfordii* is an herb used in traditional Eastern medicine. It has been shown to alleviate hot flashes associated with menopause and may serve as a good alternative to hormone replacement therapy (HRT) for individuals who are not good candidates for HRT.<sup>31</sup> Additionally, *C. wilfordii* can help improve other menopause-related complications, such as bone resorption and osteoporosis.<sup>32</sup>

***Phlomis umbrosa***  
**(ext)**

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*P. umbrosa*, also known as shady Jerusalem sage, is native to Central and Eastern China and Korea. In a double-blind, placebo-controlled study, *P. umbrosa*, when taken along with *A. gigas* and *C. wilfordii*, significantly improved menopause-related symptoms such as fatigue, anxiety, depressed mood, vertigo, vaginal dryness, pain, and insomnia.<sup>33</sup>

***Bupleurum falcatum***  
**(Chai Hu Rt)**

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*B. falcatum*, also known as sickle-leaf hare's ear, is a species of flowering plant that has been used in traditional Chinese medicine for thousands of years.<sup>34</sup> When taken in high concentrations, it has been shown to help reduce bone loss and its related complications associated with menopause.<sup>35</sup>

***Paeonia lactiflora***  
**(Bai Shao Rt)**

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*P. lactiflora*, commonly known as Bai Shao or White Peony, is a plant frequently used in traditional Chinese medicine. Studies show that supplementing with *P. lactiflora* can improve ovarian function and may help alleviate complications associated with ovarian diseases.<sup>36</sup> Additionally, *P. lactiflora* has been shown to be particularly beneficial for easing dysmenorrhea, or disruptively painful menstruation.<sup>37</sup>

### ***Actractylodes* (Bai Zhu)**

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Bai Zhu is the common name for the powerful plant species *Atractylodes macrocephala*. The root of this plant is used in traditional Chinese medicine and offers numerous physiological benefits. Studies show that *A. macrocephala* can increase serum estradiol and osteocalcin levels, which helps in preventing osteoporosis.<sup>38</sup>

### ***Poria cocos* (Fu ling)**

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*Poria cocos* is a mushroom that grows on decaying wood and is a powerful natural health aid commonly used in traditional Chinese medicine. Polysaccharides unique to *P. cocos* help reverse inflammation associated with chronic prostatitis. These polysaccharides also play a role in regulating sex hormones such as testosterone, dihydrotestosterone, and estradiol. Additionally, studies show that the consumption of *P. cocos* can increase microbiome diversity, which is being increasingly recognized as a crucial factor in optimizing the health and function of all body systems.<sup>39</sup>

### ***Vitex agnus-castus* (ext)**

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*V. agnus-castus*, also known as chasteberry, is a plant native to the Mediterranean. Clinical studies have shown that *V. agnus-castus* can relieve symptoms of premenstrual syndrome (PMS) such as depression, irritability, anxiety, breast pain, fatigue, and headache. *V. agnus-castus* has also been shown to alleviate symptoms of premenstrual dysphoric disorder, which includes PMS symptoms along with anger, rage, and sometimes suicidal ideation. Some studies suggest it may even be as effective as prescription medications in managing these conditions. Its effects are thought to be due to its ability to activate dopamine and certain opioid receptors. It is also reported to help manage excessive prolactin levels by inhibiting prolactin release in the pituitary.<sup>40–42</sup>



### ***Picea abies* (ext)**

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*P. abies* is a spruce tree native to Northern, Eastern, and Central Europe. It contains high concentrations of the powerful polyphenol, lignan 7-hydroxymatairesinol. This molecule is converted in the intestine to enterolactone, which exhibits mild estrogenic activity. This makes *P. abies* a potentially helpful alternative for managing intolerable menopause symptoms in individuals who are not suitable candidates for hormone replacement therapy (HRT). Additionally, due to these mild estrogenic effects, *P. abies* may offer protective benefits against prostate cancer.<sup>43,44</sup>

### **L-Leucine**

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L-leucine is an essential amino acid that is required for various necessary bodily functions. One important effect of leucine supplementation is its ability to enhance the body's response to the hormone leptin. Leptin interacts with GLP-1 to control hunger cues by producing feelings of satiety and reducing appetite. Weight gain and metabolic changes are common consequences of hormonal shifts associated with aging and menopause. It is suggested that leucine may help regulate these frustrating side effects.<sup>45</sup>

## Warnings/Contraindications

HormoneGenic is safe for general use, but is not recommended for use during pregnancy, while nursing, or while taking fertility medications.

**\*\***It is always recommended that you consult your practitioner prior to adding any new supplement to your regimen if you are pregnant, breastfeeding, experiencing renal failure, undergoing an organ transplant(s), managing diabetes with insulin, or are taking medication(s) for any pre-existing conditions. **\*\***

## Safety

All ingredients are tested before use for:

- Pathogenic microbial contaminants
- Heavy metals and/or chemical contaminants
- Purity

## Additional Information

- Gluten Free
- Dairy Free
- Vegan
- No Sugar
- Non-GMO
- cGMP Facility



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