

#### 5 Health Benefits of Golden Milk

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#### STORY AT-A-GLANCE

- > Golden milk is a hot or cold drink made with turmeric, ginger, cinnamon, honey and your choice of milk. Some recipes call for nutmeg, black pepper and other spices
- > Multiple health benefits associated with golden milk may stem from the antiinflammatory properties of the combination, which include cancer prevention and treatment, pain control and weight management
- > Golden milk has neuroprotective properties as it has shown a positive effect on learning, spatial memory and working memory. Data also suggest it plays a role in the prevention and treatment of Parkinson's disease, Alzheimer's disease, Huntington's disease and multiple sclerosis
- > Golden milk has also demonstrated weight management, antiaging, antiviral and antibacterial properties. You can make golden milk with dairy or nondairy milk; if you don't choose raw, whole, organic, grass-fed cow's milk, I recommend coconut milk for the flavor and the health benefits

Do you start your day with a hot cup of coffee? When you consider that everything we put in our mouths affects our overall health, you might want to think about adding golden milk to your daily regimen.

Also known as "Haldi ka Doodh" in Hindi, golden milk has been part of Indian culture for centuries. It is an ayurvedic drink that is commonly made with turmeric, ginger, cinnamon, honey and your choice of milk. Some recipes call for adding nutmeg, black

pepper or other spices. The mixture is heated and can be served warm or over ice for a refreshing drink in the summer months.

There are few risks to drinking golden milk unless you have an allergy to one of the ingredients. There also are many health benefits to drinking it, one of which includes adding a warm glass to your evening routine to help promote sleep.<sup>1</sup>

Erin at Well Plated<sup>2</sup> shares her recipe for golden milk and offers tips on altering the recipe to suit your taste. Additionally, turmeric milk stores well for up to three days in an airtight container in the refrigerator. When you're ready to reheat it, just add a serving to the stove and stir to combine the spices. Since it reheats well, consider making a double or triple batch so your morning or evening drink is quickly ready to go.

### **Let's Talk Turmeric**

Turmeric is a rhizome, which means it's a stem that grows underground, usually horizontally just beneath the surface.<sup>3</sup> The herb is grown throughout Southwestern Asia and is often used in foods from Iran, India, China and Thailand.<sup>4</sup> In India and China, it's also been used to treat skin diseases, infections and depression.

The color resembles curry, so you might expect golden milk to taste a bit like curry. However, it has a more subtle citrus taste that blends well with cinnamon and ginger. The health benefits extend to turmeric tea, which may be one of the secrets of the high number of centenarians living on the Japanese island of Okinawa.<sup>5</sup>

Combined with a healthy lifestyle, the people on the island enjoy a lower rate of chronic diseases that plague the rest of the world, such as cancer, heart disease, stroke and Alzheimer's.

One of the bioactive compounds in turmeric is curcumin, which is important in Ayurvedic medicine for its anti-inflammatory and antioxidant properties. Curcumin is not highly bioavailable, since it's often quickly metabolized and rapidly eliminated. You can increase the bioavailability by up to 2,000% by adding piperine, an ingredient found in black pepper.

#### **Benefit 1 — Cancer Prevention and Treatment**

According to Memorial Sloan Kettering Cancer Center,<sup>8</sup> inflammation is at the root of cancer development. Turmeric has shown to prevent cancer growth and kill certain cancer cells in lab studies, including small cell lung cancer,<sup>9</sup> breast cancer,<sup>10</sup> pancreatic cancer,<sup>11</sup> and ovarian cancer.<sup>12</sup>

In one Phase 2 randomized clinical trial,<sup>13</sup> curcumin was combined with chemotherapy and found to be safe and tolerable in those who had metastatic colorectal cancer and had the potential to improve overall survival.

Other studies included individuals using a turmeric-based topical cream<sup>14</sup> to reduce skin irritation from chemotherapy, mouthwash to reduce mouth swelling,<sup>15</sup> and clinical trials are currently underway investigating turmeric in relationship to prostate<sup>16</sup> and pancreatic cancers.<sup>17</sup>

Turmeric's success in the prevention and treatment of cancer may relate to the unique property it has in which it both promotes and suppresses angiogenesis. One study<sup>18</sup> published by the University of California-Riverside showed curcumin could promote vascular tissue growth, which may eventually be used to help regenerate injured tissue or to heal chronic wounds.

The researchers believe that the results of their studies suggest a unique delivery system that could help heal injured tissue and concluded "Overall, our magnetic hydrogels integrated the desirable properties of cytocompatibility and angiogenesis with magnetic guidance, thus proving to be promising for improving tissue regeneration."

As the researchers from the University of California noted in a press release,<sup>20</sup> curcumin also has demonstrated the ability to suppress cell growth in malignant tumors. In one study,<sup>21</sup> researchers found that curcumin inhibited gastric tumor cell growth by generating excessive amounts of reactive oxygen species that disrupted the cells.

Another review<sup>22</sup> showed curcumin selectively modulates tumor cell growth through multiple cell signaling pathways. A review of the research<sup>23</sup> also demonstrated that

curcumin could reduce the common side effects of chemotherapy or radiation therapy and may increase a patient's survival time.

# **Benefit 2 — Antiviral and Antibacterial Properties**

People have extensively used golden milk in traditional medicine to help fight the common cold and flu. One review of studies<sup>24</sup> found that curcumin has antibacterial and antiviral properties.

One study<sup>25</sup> published in the Journal of General Virology in July 2020, found curcumin can prevent transmissible gastroenteritis virus from infecting cells. When the researchers administered higher doses, the viral particles were killed.<sup>26</sup> The researchers wrote that curcumin has also demonstrated inhibitory properties against the proliferation of hepatitis B, Zika and dengue viruses.

At a time when bacterial resistance is growing<sup>27</sup> and viral fear is spreading, it only makes sense to protect your health and reduce the chance of getting sick. In India, golden milk is frequently used to treat colds.<sup>28</sup> Studies have shown that curcumin is active against bacteria and viruses<sup>29</sup> and tests involving ginger<sup>30</sup> and cinnamon,<sup>31</sup> both found in golden milk, reveal similar results.

### Benefit 3 - Promote Pain Control

The anti-inflammatory effects of turmeric may also help promote pain control. For example, people with arthritis often turn to anti-inflammatory medications to help relieve their pain and discomfort. The safety and nontoxicity of curcumin, even in high doses, have been documented in human trials.<sup>32</sup>

Curcumin has been studied for pain relief in people with osteoarthritis, which is the most common form of arthritis.<sup>33</sup> In one study<sup>34</sup> of 139 people with osteoarthritis, researchers compared curcumin against diclofenac twice daily for 28 days. They found no statistically significant differences between the groups.

They also found people taking curcumin had fewer episodes of flatulence, statistically significant weight loss and did not require an H2 blocker to reduce excess stomach acid, which 28% of those using diclofenac did. Another study<sup>35</sup> evaluated patient-reported outcomes after laparoscopic cholecystectomy and found those taking curcumin had better mean pain scores during the first and second weeks after surgery.

Animal studies have also shown that curcumin could reduce the perception of pain<sup>36</sup> and could provide pain relief in a dose-dependent manner.<sup>37</sup> Additionally, despite questions about bioavailability, curcumin treatment also appeared to facilitate recovery.

## **Benefit 4 — Neuroprotective Properties**

There's evidence that curcumin<sup>38</sup> was used as far back as 4,000 years ago and there have been over 3,000 papers published on it in the last 25 years. One animal study<sup>39</sup> showed curcumin influences learning and spatial memory. The results led the researchers to believe that curcumin could help mitigate the cognitive impairment associated with a decrease in brain cell proliferation and neuroblast differentiation.

It has also been suggested that curcumin plays a role in the prevention and treatment of other neurodegenerative diseases, such as Alzheimer's disease,<sup>40</sup> Parkinson's disease<sup>41</sup> and memory impairment without dementia.<sup>42</sup> Other brain disorders have been positively affected by the administration of curcumin including multiple sclerosis, Huntington's disease, stroke, autism and amyotrophic lateral sclerosis (ALS).<sup>43</sup>

Older adults<sup>44</sup> who took the supplement for at least four weeks showed significant improvement in working memory, general fatigue and contentedness. Other data<sup>45</sup> showed those who took curcumin had significant improvement in memory and attention, as well as mild improvement in mood and significantly fewer amyloid and tau signals in the amygdala and hypothalamus, areas of the brain that controls some memory and emotional functions.

Another literature review<sup>46</sup> assessed the benefits of curcumin on several psychiatric disorders. The researchers wrote that the influence of curcumin on various biological

activities may be responsible for the results. Additionally, many of these biological activities "are dysregulated in several neuropsychiatric disorders." 47

### **Benefit 5 — Antiaging and Weight Loss**

As is demonstrated in this short video, the people of Okinawa enjoy a long and active lifespan, likely related to their antiaging dietary habits, which include daily turmeric tea.

Curcumin is also used in supplements and cosmetic products designed to reduce inflammation.<sup>48</sup> This may help acne and eczema, and even slow the appearance of skin aging. Rising interest in curcumin has created a market, which experts believe will grow to \$191.89 million by 2028.<sup>49</sup>

Research has demonstrated that curcumin promotes wound healing by modulating collagen and reducing reactive oxygen species. An animal study<sup>50</sup> demonstrated that curcumin increased cellular proliferation and collagen production at wound sites, including better maturation and crosslinking, which improved tensile strength.

But golden milk has more than turmeric. The ginger and cinnamon commonly used in the recipe have demonstrated the ability to lower blood sugar levels. This in turn aids in weight loss.

Cinnamon demonstrates a protective effect against metabolic syndrome, including insulin resistance, high blood pressure and increased weight gain.<sup>51</sup> Ginger can also help lower your A1C level, a long-term marker of blood sugar control.<sup>52</sup>

The mix of spices offers powerful antioxidant properties that help prevent cell damage and reduce oxidative stress. This contributes to the anti-inflammatory properties on which many of the health claims are founded. Although many think of obesity as a simple connection between the number of calories eaten and the number of calories burned, inflammation is also a risk factor that triggers a vicious cycle.<sup>53</sup>

An excess number of calories will stimulate fat tissue to release inflammatory mediators. This reduces the production of adiponectin, which is a hormone that plays a

crucial role against insulin resistance.<sup>54</sup> This predisposes you to a proinflammatory state and excess oxidative stress, setting up a cycle of inflammation, insulin resistance and weight gain.

## **Dairy or Nondairy Golden Milk?**

Golden milk can be made with whatever type of milk you like, such as coconut milk or cow's milk. While some steer clear of dairy for fear of increasing their risk of heart disease, several studies have demonstrated the opposite is actually true. One study<sup>55</sup> published in September 2021 looked at the association between serum biomarkers of dairy fat and the incidence of heart disease.

The researchers found those individuals with higher biomarkers for pentadecanoic acid (C15:0) found in dairy products had a lower incidence of heart disease risk and a lower incidence of all-cause mortality. If you choose dairy milk, seek out organic, grass-fed, raw milk.

If you choose to use nondairy milk, I recommend coconut milk for the health benefits and superior taste. I believe the health benefits of coconut milk may help boost the overall benefits of golden milk and you'll find the added benefits of lowering inflammation and weight management will help you take control of your health.

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