# CANCER DECOSED

# Curcumin

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# Turmeric & Cancer – Cancer Decoded.net

This is free guide from CancerDecoded.net. For a free Mini Course on Foods and Cancer including three powerful foods that can help you fight cancer, please visit

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# Introduction

To understand how nutrition impacts your fight, you need to understand the roles that food and nutrition play in your fight against cancer.

Food forms the building blocks of the body. You need to understand the role of the various building blocks so you can include all of the building blocks you need to build a healthy new body.

Food also plays a medical role. Hippocrates said, "Let food be thy medicine and medicine thy food." This was never truer than in the fight against cancer. There are foods that can be powerful allies in the fight against the cancer itself as well as the factors that cause cancer. Foods are also powerful fighters against the side effects and symptoms you experience because of the cancer and the treatments for the disease.

To apply the knowledge in this section, you don't need to become a nutritionist. In fact it is good to work with a nutritionist to help you make sure you are getting the building blocks you need, but that is not essential. This guide will teach you about what you need to make sure is included in your diet, both from a dietary point of view, as well as from the point of view of fighting cancer and the symptoms of cancer. So let's get started.

# Foods as Building Blocks of the Body

If you've ever built a house or know how a house is built, you will know you need bricks and cement and you will also need some chemicals in the cement to make sure it's a good, solid house.

The body is no different. Nutrition provides the bricks, mortar and other chemicals – like vitamins and minerals – to build a solid, healthy body.

The essential building blocks of the body are proteins, fats and carbohydrates. So you need a healthy diet with a good balance of proteins, fats and carbohydrates. The Cancer Decoded Guide has more information on these building blocks and what they do and how much of each you need for a healthy diet, but for the free guide, we can't include all of the information – there is just too much information. So for the free guide – just make sure you get a healthy balanced diet of proteins, fats and some limited carbs and also make sure you take a really good mutli-vitamin to provide your body with the vitamins it needs.

# Food as Medicine

As mentioned above, food has two vital functions in terms of helping you fight cancer. Food provides the building blocks you need to replace all the cancer cells with new healthy cells.

But food is also an important ally in actually helping you to fight the disease itself. Here are some of the functions that food can help you with:

Food can help you kill the cancer cells.

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- Food can help you create or eliminate the inflammation that goes along with cancer.
- Food can help you boost the immune system to help you fight the disease.
- Food can help you keep the body clean by supporting detoxification of the body.
- Food can help you regulate blood sugar levels or foods can cause insulin spikes, which help the cancer to grow and spread.
- Food can help you create an alkaline pH in the body that stops cancer or foods can create an acidic environment in the body, which causes cancer to grow and spread.
- Food can help you improve your sleep and thus improve your chances of fighting the disease.
- Food can help you reduce the side effects of the treatments for cancer, which in turn will help you keep a positive mental attitude and a positive mental attitude gives you so much more chance of beating the disease.

### A Quick Note about Food as Medicine

Modern drugs all have their roots and their start as the foods that we eat. Every drug on the market today comes from some ingredient that was extracted from the foods, herbs and plants that we eat. But our drugs are highly concentrated versions of those foods. Our drugs may even be new compounds that are based on those foods.

The important thing to realize is that, unlike drugs, foods don't always have an immediate result on the body. When you have a headache for example, and you take a headache pill, the drug normally acts within an hour or two. If you had taken a herb, it may not work in an hour or two but it, depending on the herb or food, stops you from having headaches in the future. That is only if you continue to include these foods/herbs in your diet over long periods.

In other words, foods and herbs are powerful helpers in removing the causes and not just treating the symptoms for an hour or two. There are some exceptions to this rule. Ginger for instance has an almost immediate impact on nausea and will take away nausea really quickly. However, the foods you add to your lifetime cancer plan will be foods you add for the rest of time because they are foods that will build a healthy body and then then will continue to ensure you remain healthy.

This guide contains excerpts from <u>CancerDecoded.net</u>. Sign up for the free mini course which includes Turmeric, Lemon and Cruciferous Vegetables.

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# What is Turmeric?

Turmeric is a yellow aromatic spice that gives a lot of Indian dishes their particular aromatic flavor. Turmeric is an herbaceous root that is actually part of the ginger family so it should be no surprise that it's also great for cancer.

Turmeric comes from South East India and requires lots of rain to thrive and grow. To create the turmeric powder, turmeric roots are harvested, boiled and then dried and ground up into the powder we generally buy for curry.



The most important ingredient in turmeric is called

curcumin and it is curcumin that gives turmeric its amazing anti-inflammatory and anticancer properties.

# Curcumin/Turmeric

Curcumin is the active ingredient found in turmeric. Scientists have been studying the effects of curcumin for years and there is still tons of research being done on the benefits of curcumin. You can get curcumin as a supplement at some health stores. You can also include curcumin in your daily cancer diet using the golden milk receipe

Studies on curcumin and the effects of curcumin include its effects on:

- Cancer
- Diabetes
- Arthritis
- Allergies
- Alzheimer's disease

So let's take a look at the research done on cancer and curcumin.

# Turmeric and Inflammation

Inflammation is a vicious cycle in cancer. <u>Read the inflammation cancer cycle or watch</u> <u>the video to see why</u>. That is why treating inflammation is important for cancer patients because inflammation causes cancer and then cancer causes inflammation to grow, get a blood supply and then spread.

There are literally hundreds of studies on the effects of curcumin on inflammation. In terms of cancer, the anti-inflammatory properties that are most important include the fact that curcumin reduces COX2 and reduces the production of TNF- $\alpha$  and Interleukins

#### **Cancer Decoded - Turmeric**

1,2,6,8, and 12. These are the inflammatory chemicals that are involved in the cancer inflammation cycle.<sup>1</sup>

In one study, turmeric actually beat a standard NSAID drug in the reduction of inflammation and pain in arthritis patients.<sup>2</sup>

According to Natural Health Research, "Turmeric (*Curcuma longa*) is a bright yellow, ancient spice and a traditional remedy that has been used as a medicine, condiment and flavoring based on records dating back to 600 BCE. Turmeric and its curcuminoids also exhibit strong antioxidant activity, enhance cellular resistance to oxidative damage, and enhance the body's natural antioxidant glutathione levels; which in turn aids the liver in detoxification. Turmeric has also been found to have hepatoprotective (i.e. liver-protective) properties against a variety of liver-toxic chemicals and drugs." <sup>3</sup>

# **Turmeric and Digestive Ailments**

Turmeric has been shown to reduce digestive complaints like Ulcerative colitis and has reduced the recurrence of the disease.<sup>4</sup>

# **Turmeric and Cancer**

Turmeric is a powerful helper in fighting cancer. Some cancer patients choose turmeric as their only cure. There does not seem to be enough evidence that turmeric alone is powerful enough to kill enough cancer cells but there is certainly research that shows turmeric can kill cancer cells. If you choose it as your main cancer cure, then you should consider other alternative health strategies to help you kill the cancer. For other alternative health strategies like Vitamin B17, Graviola etc on Cancer Decoded.

Here are the studies on Cancer and Turmeric:

• Turmeric stops cancer from starting: Preclinical cancer research using curcumin has shown it inhibits carcinogenesis in a number of cancer types, including colorectal, pancreatic, gastric, prostate, hepatic, breast, and oral cancers, and leukemia, and at various stages of carcinogenesis.<sup>5</sup>

<sup>1</sup> Alternative Medicine Review Volume 14, Number 2 2009 – See pdf download Curcumin

- <sup>2</sup> http://www.greenmedinfo.com/article/efficacy-and-safety-curcuma-domestica-extracts-comparedibuprofen-patients
- <sup>3</sup> http://www.naturalhealthresearch.org/detoxification-dietary-supplements-to-support-promote-the-process/
- <sup>4</sup> http://www.med.nyu.edu/content?ChunkIID=21874

<sup>5</sup> Aggarwal BB, Kumar A, Bharti AC. Anticancer potential of curcumin: preclinical and clinical studies. Anticancer Res 2003;23:363-398. 7

- Turmeric stopped cancer from growing Turmeric also helps to prevent angiogenesis – in other words, it prevents the tumor from creating its own blood supply to help the tumor grow even bigger.<sup>6</sup>
- Turmeric stopped cancer from spreading Turmeric stops metastasis or the spread of cancer cells in certain cancers.<sup>7</sup>
- Turmeric kills cancer cells Turmeric also encourages cancer cells to commit suicide – apoptosis.<sup>8</sup>
- There are current trials on turmeric and cancer to see if it can be used as a drug
  There are currently at least nine ongoing trials investigating the effects of turmeric and curcumin as a cancer therapy.<sup>9</sup>
- Turmeric can be used with Chemo if you are having chemo Turmeric can be used in conjunction with chemotherapy. In fact, curcumin has been found to enhance certain types of chemotherapy and radiation and is now being used as a complementary therapy during chemo by some clinics.<sup>10</sup>
- **Turmeric can make chemo more effective** Turmeric has been found to enhance the effects of chemotherapy in certain cancers.<sup>21</sup>
- Turmeric makes chemo more effective Another study found curcumin made certain tumors more susceptible to the chemo so the chemo killed more of the tumor.<sup>12</sup>
- **Turmeric prevents certain cancers** Other studies have shown curcumin helps to suppress certain cancers.<sup>13</sup>
- Turmeric has been used on the following cancers Turmeric studies have shown that curcumin has been effective in:
  - 1. Bowel Cancer<sup>14 15</sup>
  - 2. Throat and esophageal cancer<sup>16</sup>
  - 3. Colorectal cancer<sup>17</sup>

- <sup>11</sup> http://newsroom.ucla.edu/releases/the-major-component-in-turmeric-176878
- <sup>12</sup> http://www.livescience.com/35077-indian-spice-curcumin-enhances-chemotherapy-powder.html
- <sup>13</sup> http://www.livescience.com/35077-indian-spice-curcumin-enhances-chemotherapy-powder.html

<sup>15</sup> http://www.cancerresearchuk.org/cancer-help/trials/a-study-looking-at-curcumin-to-help-preventbowel-cancer

<sup>17</sup> http://www.cancer.org/treatment/treatmentsandsideeffects/

<sup>&</sup>lt;sup>6</sup> http://articles.mercola.com/sites/articles/archive/2011/04/26/the-spice-that-actually-doubles-as-a-powerful-antiinflammatory aspx

<sup>&</sup>lt;sup>7</sup> http://www.ncbi.nlm.nih.gov/pubmed/18794131

<sup>&</sup>lt;sup>8</sup> http://articles.mercola.com/sites/articles/archive/2011/04/26/the-spice-that-actually-doubles-as-a-powerful-antiinflammatory.aspx

<sup>&</sup>lt;sup>9</sup> Alternative Medicine Review Volume 14, Number 2 2009 – See pdf download Curcumin

<sup>&</sup>lt;sup>10</sup> http://www-livescience.com/35077-indian-spice-curcumin-enhances-chemotherapy-powder.html

<sup>&</sup>lt;sup>14</sup> http://scienceblog.cancerresearchuk.org/2012/05/07/new-trial-to-test-spice-extract-curcumin-against-bowel-cancer/

<sup>&</sup>lt;sup>16</sup> http://www.ncbi.nlm.nih.gov/pubmed/22363450

complementaryandalternativemedicine/herbsvitaminsandminerals/turmeric

- 4. Breast cancer<sup>18</sup><sup>19</sup>
- 5. Cervical cancer<sup>20 21</sup>
- 6. Lung cancer<sup>22 23 24</sup>
- 7. Pancreatic cancer<sup>25</sup>
- 8. Prostate cancer<sup>26 27</sup>
- 9. Skin cancer<sup>28</sup>
- There are lots of studies on turmeric and cancer The GreenMedInfo com has 26 preclinical studies showing it kills liver cancer cells and tumors, including one case study involving a 6-month old infant with a life-threatening liver vascular tumor (hemangioendothelioma) who was reported treated successfully with a dietary supplement of curcumin, with 6-year follow-up.<sup>29</sup>
- **Turmeric protects smokers from cancer** Turmeric has an anti-mutagenic activity on urinary mutagens in smokers.<sup>30</sup>

# **Turmeric & Detox**

Detox is an important part of any cancer treatment plan. For more information on how to detox properly and how to include a good detox plan in your cancer plan, read the Detox section and watch the video. Healthy liver function is essential to ensure you are able to fight off the cancer, get healthy and remain healthy. Turmeric is one of the spices that promotes and supports the liver in detox and also helps the rest of the body to detox.

Turmeric has the following detox functions:

- Curcumin promotes bile production and flow<sup>31</sup>
- Boosts liver detox and flustees out carcinogens<sup>32</sup>

<sup>&</sup>lt;sup>18</sup> J Breast Cancer 2013 June; 16(2): 133-137- See Breast Cancer Curcumin PDF

<sup>&</sup>lt;sup>19</sup> http://cancerres.aacrjournals.org/content/74/4/1250.short

<sup>&</sup>lt;sup>20</sup> http://www.lef.org/magazine/mag2011/mar2011\_How-Curcumin-Protects-Against-Cancer\_01.htm

<sup>&</sup>lt;sup>21</sup> http://www.hindawi.com/journals/bmri/2014/817972/

<sup>&</sup>lt;sup>22</sup> http://www.ncbi.nlm.nih.gov/pubmed/23888319

<sup>&</sup>lt;sup>23</sup> http://cancerres.aacrjournals.org/content/68/18/7428.full

<sup>&</sup>lt;sup>24</sup> http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0037960

<sup>&</sup>lt;sup>25</sup> http://www.greenmedinfo.com/blog/curcumin-extract-kills-highly-lethal-pancreatic-tumors-preclinicalstudy-revealed

<sup>&</sup>lt;sup>26</sup> http://www.sciencedaily.com/releases/2012/10/121012112152.htm

<sup>&</sup>lt;sup>27</sup> http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2820199/

<sup>&</sup>lt;sup>28</sup> http://www.turmericforhealth.com/turmeric-benefits/turmeric-for-cancer

<sup>&</sup>lt;sup>29</sup> http://www.greenmedinfo.com/blog/why-turmeric-may-be-diseased-livers-best-friend-friend-a

<sup>&</sup>lt;sup>30</sup> http://www.greenmedinfo.com/article/tumeric-has-anti-mutagenic-activity-urinary-mutagens-smokers

<sup>&</sup>lt;sup>31</sup> http://www.livestrong.com/article/211962-turmeric-liver-detox/

<sup>&</sup>lt;sup>32</sup> http://www.whfoods.com/genpage.php?tname=foodspice&dbid=78

#### **Turmeric and Bile Flow**

Bile is stored in the gallbladder for when it is needed. Bile is essential to remove toxins from our food and to break down the fats that we eat. Bile is therefore an essential ingredient in digestion and in detoxification.<sup>33</sup>

Curcumin actually promotes the production and secretion of bile. So curcumin aids detox by stimulating bile secretion and that in turn helps to remove the toxins from your body.<sup>34</sup>

# **Turmeric and Liver function**

Studies show turmeric protects the liver against certain viruses  $^{35}_{\ \ \ }$ 

South Korean researchers at the Clinical Trial Center for Functional Foods, Chonbuk National University Hospital, tested their hypothesis that turmeric may improve liver function by administering a fermented form to subjects 20 years old and above, who were diagnosed with mild to moderate elevated alanine aminotransferase (ALT) levels, a marker for liver damage and/or dysfunction.<sup>36</sup>

According to a new study in the *Journal of the Medical Association of Thailand*, scientists there have found that the livers of diabetic rats were repaired, and even regenerated, with the help of turmeric.<sup>37</sup>

This model suggests turmeric and myrrh, separately and together, may protect against oxidative stress by improving glutathione production.<sup>38</sup>

# **Turmeric and Blood Sugar Regulation**

Normalizing blood sugar levels is essential for every cancer patient. <u>To understand why</u> <u>sugar and blood sugar levels are important in cancer, watch the video on Sugar and</u> <u>Cancer and read the blood sugar PDF.</u> Turmeric has remarkable blood sugar regulating properties. There are many studies on the effects of curcumin on diabetes that show that turmeric has the ability to lower and regulate blood sugar levels.

Studies on blood sugar include:

<sup>33</sup> http://www.turmericforhealth.com/turmeric-benefits/turmeric-and-bile

- <sup>34</sup> http://umm.edu/health/medical/altmed/herb/turmeric#ixzz2PBCq87oL
- <sup>35</sup> http://www.livestrong.com/article/442134-how-does-turmeric-damage-the-liver/
- <sup>36</sup> http://www.greenmedinfo.com/blog/why-turmeric-may-be-diseased-livers-best-friend-friend-a
- <sup>37</sup> http://www.sott.net/article/252883-Turmeric-repairs-damaged-liver-tissues-promotes-overall-liverhealth

<sup>38</sup> http://www.livestrong.com/article/442134-how-does-turmeric-damage-the-liver/

- Turmeric regulated blood glucose levels The turmeric (Curcuma longa L. rhizomes) EtOH extract significantly suppressed an increase in blood glucose level in type 2 diabetic KK-A(y) mice.<sup>39</sup>
- **Turmeric lowered blood sugar levels** Curcumin's blood sugar lowering effect may be due to its inhibitory effect on hepatic gluconeogenesis.<sup>40</sup>
- Turmeric lowered PSA in prostate cancer A polyphenol-rich whole food supplement significantly affected the rate of PSA progression among men with prostate cancer.<sup>41</sup>
- Turmeric prevents type 2 diabetes by regulating blood sugar. Turmeric Extract 100% Effective At Preventing Type 2 Diabetes, ADA Journal Study Finds<sup>42</sup>

# How to Include Turmeric in Your Cancer Plan

Before you begin to add spices like turmeric to your diet, speak to your cancer care provider or nutritionist about the supplements and drugs you are taking.

Generally turmeric is safe to add and can even make some chemo drugs more effective.

Turmeric is not a cure on its own but can help to ease the side-effects of chemo, improve the effects of chemo and also to reduce the pain and inflammation caused by cancer.

There are numerous turmeric supplements on the market to help you get sufficient quantities of turmeric.

You can also add turmeric to your diet by drinking golden milk every day.

See the Recipes Guide for instructions on how to prepare golden milk.

Turmeric can be added to any savery dishes and curries as well.43

# Recipe Golden Milk

Golden Milk is a great way to make sure you get a good amount of turmeric everyday. Making golden milk is quick and really cheap.

To make golden milk:

<sup>39</sup> http://www.greenmedinfo.com/article/turmeric-has-significant-blood-sugar-lowering-activity-type-2diabetic-mice

- <sup>40</sup> http://www.greenmedinfo.com/article/curcumins-blood-sugar-lowering-effect-may-be-due-itsinhibitory-effect-hepatic
- <sup>41</sup> http://www.greenmedinfo.com/article/polyphenol-rich-whole-food-supplement-significantly-effectedrate-psa

<sup>42</sup> http://www.greenmedinfo.com/blog/turmeric-extract-100-effective-preventing-type-2-diabetes-adajournal-study-finds

43 http://authoritynutrition.com/top-10-evidence-based-health-benefits-of-turmeric/

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- 1. One cup of Turmeric powder
- 2. One cup of water

Mix the water and turmeric to form a paste. Very gently cook or heat the pate and allow it to cook for about 5 minutes. DO NOT LET IT BURN.

Allow the paste to cool

Store it in a glass jar in the fridge – it can last for about three weeks.

To make the milk:

- 1. Take a glass of milk whatever milk you like Almond milk or even cow's milk
- 2. Add a teaspoon or two of turmeric paste to the milk
- Mix well and drink. You can add Stevia to sweeten or Taulung honey. Taulung honey has cancer fighting properties too – you can read about them in Cancer Decoded.

Drink one glass of golden milk each day.

# Other medical studies on Turmeric & Cancer include:

Arbiser JL, Klauber N, Rohan R, et al. Curcumin is an in vivo inhibitor of angiogenesis. *Mol Med* . 1998;4:376-383.

Cheng AL, Hsu CH, Lin JK, et al. Phase I clinical trial of curcumin, a chemopreventive agent, in patients with high-risk or pre-malignant lesions. *Anticoncer Res.* 2001;21:2895-2900.

Deshpande SS, Ingle AD, Maru GB. Chemopreventive efficacy of curcumin-free aqueous turmeric extract in 7,12-dimethylbenz(a)anthracene-induced rat mammary tumorigenesis. *Cancer Lett.* 1998;123:35-40.

Dorai T, Gehani N, Katz A. Therapeutic potential of curcumin in human prostate cancer. Curcumin inhibits tyrosine kinase activity of epidermal growth factor receptor and depletes the protein. *Mol Urol.* 2000;4:1-6.

Ireson CR, Jones DJ, Or 5, et al. Metabolism of the cancer chemopreventive agent curcumin in human and rat intestine. *Cancer Epidemiol Biomarkers Prev.* 2002;11:105-111.

Krishnaswamy K, Goud VK, Sesikeran B, et al. Retardation of experimental tumorigenesis and reduction in DNA adducts by turmeric and curcumin. *Nutr Cancer*. 1998;30:163-166.

Li JK, Lin-Shia SY. Mechanisms of cancer chemoprevention by curcumin. *Proc Natl Sci Counc Repub China B.* 2001;25:59-66.

Smith WA, Freeman JW, Gupta RC. Effect of chemopreventive agents on DNA adduction induced by the potent mammary carcinogen dibenzo[a,l]pyrene in the human breast cells MCF-7. *Mutat Res.* 2001;480-481:97-108.