9 Evidence-Based Medicinal Properties of Oranges

The orange is both a literal and symbolic embodiment of the sun, from whose light it is formed. As a whole food it irradiates us with a spectrum of healing properties, the most prominent of which some call “vitamin C activity,” but which is not reducible to the chemical skeleton known as ‘ascorbic acid.’ Science now confirms the orange has a broad range of medicinal properties, which is why the ancients knew it both as a food and a medicine.

“It’s bizarre that the produce manager is more important to my children’s health than the pediatrician.” ~ Meryl Streep

As our increasingly overdiagnosed and overmedicated population leaps lemming-like over the cliff of conventional medicine, with most drugs carrying a dozen or more adverse side effects for every benefit advertised, we can find great wisdom in Meryl Streep’s quote.

Indeed, many common fruits and vegetables “crouching” at the local produce stand have “hidden healing powers,” and have been used as both medicines and nourishing foods since time immemorial.

I firmly believe that access to fresh, organic produce is as vital a health necessity as access to water, and clean air. Over the course of hundreds of millions of years, the bodies of our ancestors (whose genes became ours) co-evolved with higher, flowering and fruiting plants, and the tens of thousands of phytocompounds they contain, many of which now regulate and maintain the expression and health of our genes. Therefore, without the regular consumption of these foods, suboptimal health, and likely many diseases, is inevitable. One could rightly say that chemotherapy and radiotherapy were invented mainly to treat fruit and vegetable deficiency, but of course providing a solution far worse than the disease, and certainly eternally incapable of addressing the root causes of cancer.

Orange is one such food-medicine marvel, containing a broad range of compounds increasingly being recognized to be essential for human health. We consider it a sweet treat, its juice a refreshing beverage, but do we ever really reflect on its medicinal properties? GreenMedInfo.com has indexed no less than 37 distinct health benefits its use may confer, all of which can be explored on our Orange Medicinal Properties research page. What follows are some of its most well-established therapeutic applications, divided into three parts: the juice, the peel and the aroma:

The Juice of the Orange

Many of us mistakenly look to orange juice today as a dangerous source of highly concentrated fructose – simple “carbs” – without recognizing its profound medicinal properties. We sometimes think we can get the vitamin C activity oranges contain through the semi-synthetic ‘nutrient’ ascorbic acid, without realizing that an orange embodies (as do all whole foods) a complex orchestra of chemistries, the handiwork of millions of years of evolution, which is to say a process of intelligent biological design. The ‘monochemical nutrient’ – ascorbic acid – is merely a shadow of the vitamin C activity that is carried and expressed through only living foods. The orange, after all, looks like a miniature sun, is formed as a condensation of energy and information from sunlight, and therefore is capable of storing and after being eaten irradiating us with life-giving packets of information-dense gene-regulating nutrition, by a mechanism that will never be fully reducible to or intelligible by the chemical skeleton we know of as ascorbic acid.
The Medicinal Properties of Oranges

Given that thought, here are some of the evidence-based benefits of orange juice:

- **Orange Juice Improves “Good” Cholesterol:** While it is debatable that lowering so-called “LDL” cholesterol is nearly as good for heart health as statin drug manufacturers would like for us to believe, raising “HDL” cholesterol does seem to have real health benefits. This is, however, quite hard to do with diet and nutrition, and impossible through medication. Other than taking high-dose fish oil, few things have been studied to be effective. Except, that is, orange juice. A 2000 study found that the consumption of 750 mL of orange juice a day, over a 4 weeks, improved blood lipid profiles by decreasing the LDL-HDL cholesterol ratio by 16% in patients with elevated cholesterol.[1]

- **Orange Juice Boosts Bone Health:** A 2006 animal study in male rats found that orange juice positively influenced antioxidant status and bone strength.[2]

- **Orange Juice (mixed with Blackcurrant Juice) Reduces Inflammation:** A 2009 study in patients with peripheral artery disease found that orange and blackcurrant juice reduced C-reactive protein (11%) and fibrinogen levels (3%), two concrete measures of systemic inflammation.[3] A 2010 study found that Orange juice neutralizes the proinflammatory effect of a high-fat, high-carbohydrate meal and prevents endotoxin induced toxicity.[4]

- **Orange Juice Boosts Weight Loss:** A 2011 study found that children who regularly drank orange juice consumed an average of 523 calories a day more than children who did not drink orange juice regularly. Yet surprisingly, there was no difference in the weight levels between the orange juice consumers and the non-orange juice consumers.[5]

- **Orange Juice May Dissolve Kidney Stones:** A 2006 study found that orange juice consumption was associated with lower calculated calcium oxalate supersaturation and lower calculated undissociated uric acid, two indices of lowered urinary calcium stone formation.[6]

- **Orange Juice Extract Suppresses Prostate Proliferation:** Despite the fructose content, a 2006 study found a standardized extract of red orange juice inhibited the proliferation of human prostate cells in vitro.[7]

The Peel of the Orange

The peel of the orange contains a broad range of potent, potentially therapeutic compounds. These include pectin and flavonoid constituents, such as hersperiden, naringin, polymethoxyflavones, quercetin and rutin, various carotenoids, and a major odor constituent known as d-limonene, which makes up 90% of the citrus peel oil content, and is a compound that gets its name from the rind of the lemon, which contains a significant quantity of it. It is listed in the US Code of Federal Regulations as generally recognized as safe (GRAS), and is commonly used as a flavoring agent. D-limonene has been studied to have potent anti-cancer properties, including against metastatic melanoma.[8]

The whole peel extract has been studied to have a wide range of benefits:

- **Orange Peel exhibits Anti-Arthritic Properties:** A 2010 study found that orange peel extract significant suppressed vaccine adjuvant-induced arthritis in a preclinical model.[9]

- **Orange Peel (Flavonoids) Exhibit Anti-Cancer Properties:** A 2007 study found that orange peel extract inhibited tumorigenesis in a preclinical mouse model of adenomatous polyposis and
increases programmed cell death.[i] Two additional 2007 studies found that orange peel extract has anti-breast cancer properties. The first, by exhibiting chemopreventive properties against mammary tumor lesions in an animal model.[10] The second, by inhibiting breast cancer cell lines in vitro.[11] Additionally, a 2000 study found that flavanone intake is inversely associated with esophageal cancer risk and may account, with vitamin C, for the protective effect of fruit, especially citrus fruit, on esophageal cancer.[12] Finally, a 2005 study found that carotenoids from orange may help to reverse multidrug resistance.

The Aroma of the Orange

The physiological mechanisms by which aromas may have therapeutic properties (aroma-therapy) are well-established. The small molecules that comprise the aroma of things, are capable of entering directly through the nostrils and into the olfactory lobe, thus enabling them to have profound affects on deep structures within our brain, and as a result our entire bodily and emotional infrastructure.

- **Orange Scent Reduces Anxiety, Boosts Mood:** A 2000 study found that the aroma of orange essential oil reduces anxiety, generates a more positive mood, and a higher level of calmness in women exposed to it in a dental office waiting room.[13] This finding was confirmed again in a 2005 study, where ambient odors of reduced anxiety and improved mood in patients waiting for dental treatment.[14]

References:


[8] GreenMedInfo.com, D-Limenone’s Anti-Cancer Properties


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He founded Greenmedinfo.com in 2008 in order to provide the world an open access, evidence-based resource supporting natural and integrative modalities. It is internationally recognized as the largest and most widely referenced health resource of its kind.