

Featured Topic: Hemp Oil (5 slides)

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Hemp for pain relief and more...

- One of the most in-demand ingredients of 2018, consumers are flocking to buy hemp oil for

- Pain
- Sleep problems
- Stress/anxiety
- PTSD and depression
- Cancer
- And more!

Did you know? The CDC reports that 1 in 5 Americans are living with chronic pain – that is 20% of the US population!

How does it work?

- Compounds in hemp oil called **phytocannabinoids** trigger receptors in the body called endocannabinoid receptors (part of the **endocannabinoid system**)
 - CBD is the one of the best known but it isn't the only one!
 - There are 80-100 phytocannabinoids in hemp oil
- The endocannabinoid system affects many different functions in the body, including
 - pain perception
 - brain and nervous system function
 - mood and memory
 - immune system
 - appetite and metabolism
 - energy and more

Uses for Hemp Oil

- Chronic pain – arthritis, bursitis, nerve pain, even the pain associated with multiple sclerosis
- Relief of anxiety
- Cancer treatment/prevention
- Insomnia and sleep problems
- Mental function and Alzheimer's disease
- Safe to take on a daily basis!

Hemp Oil is Not Marijuana

- Marijuana plants are low and bushy, and contain lots of THC – the compound in Cannabis that causes euphoria and a “high”
- Hemp plants are tall and skinny, and do not have much THC, but *do* have a lot of CBD and other health promoting phytocannabinoids
- By law, retail hemp oil must have less than 0.3% THC

What to know about hemp oil:

- Legal hemp oil contains less than 0.3% THC and is from the **hemp stalk**
 - Not legal to obtain hemp oil from leaves or flowers of the cannabis plant
- Products that are **hemp seed only** do not contain CBD or other beneficial phytocannabinoids – must have extract **from the hemp stalk** to get the phytocannabinoids
- Dosage: 50 mg of hemp oil (stalk) OR combine 25 mg of hemp oil with 250 mg of curcumin for synergistic effects

Nutrient of the Day: Silica

(3 slides)

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Silica from Horsetail

- *Horsetail* is a plant related to ferns
- It contains almost 80% silica – rich source of this mineral
- Silica is essential for bone formation/mineralization
- **Gets calcium into bones:** increases calcium absorption and retention in bones **by over 50%**
 - Stronger bones – less risk of fractures, faster recovery after a fracture
 - In an animal model of osteoporosis, supplemental silica was associated with a 30% increase in bone density

Silica is not just for bones

- Silica is also required for collagen and connective tissue: hair, nails, and skin
- **Increases** collagen formation by **over 50%**
- In a study of women with fine hair, nine months of supplemental silica increased hair strength by almost 10%
- In women with sun-damaged skin, 20 weeks of silica treatment reduced skin roughness by almost 20%, and strengthened hair and nails

What to know about silica

- Look for **plant-based** silica from horsetail
 - Did you know? Orthosilicic acid is synthetic, it is made from sand
 - Bamboo silica isn't easily absorbed – the silica molecules are much larger than silica from horsetail
- For skin, hair, nails, and basic bone support: take 20 mg daily
- If you have experienced a bone fracture, have osteoporosis, have had dental implants, or have any other bone concerns: 40 to 80 mg daily for 4 to 8 weeks

Improved Absorption

- Proprietary extraction method – water and low temperature
 - discards the insoluble, abrasive compounds
 - Leaves silica bound to flavonoids, sugars, acids and phenols
 - much more soluble form
- Flavonoids enhance the solubility of the silica, increasing bioavailability
 - react with several intestinal transport systems to increase the cellular absorption of molecules bound to them
- Purification and marine lipids also increases absorption

A New Cause of Antibiotic Resistance (3 slides)

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What is antibiotic resistance?

- Antibiotics are drugs that kill off bacterial infections (strep, E. coli, salmonella, etc)
- When bacteria develop the ability to defeat the drugs designed to kill them, they are **'antibiotic resistant'**
- One of the leading causes of antibiotic resistance is the overuse of antibiotics
- In fact, **47 million unnecessary prescriptions (over 30% of all antibiotic prescriptions)** are given out every year for conditions that don't respond to antibiotics: viral respiratory infections [common cold], bronchitis, asthma, viral pneumonia, and other viral infections
- Antibiotic-resistant bacteria cause 2 million illnesses and 23,000 deaths every year in the US

New cause of antibiotic resistance: Prozac

- Researchers in Australia exposed bacteria that had NOT developed antibiotic resistance to the antidepressant drug fluoxetine (Prozac)
- They then took all the bacteria that survived fluoxetine and exposed them to common antibiotic drugs
- Results
 - Exposure to fluoxetine triggered mutations in the bacteria that gave them resistance to the antibiotics – including amoxicillin and tetracycline
- But there's more! Up to 11% of fluoxetine is excreted from the body, unchanged, in urine where it can enter the sewer system and our environment
 - Water treatment facilities cannot entirely remove fluoxetine
 - Researchers have found fluoxetine not only in river and lake water, but in fish, soil and the roots of plants

Alternatives to Prozac

#1: Curcumin: shown in clinical trials to be equally as effective as the prescription drug fluoxetine at reducing the symptoms of depression – without the concerns about antibiotic resistance and environmental contamination!

– Dosage: 750 mg curcumin with turmeric essential oil daily

#2: Exercise: might work as well as drugs - 30% of participants in a clinical trial came out of their depression completely, after exercising just 10-30 minutes a day!

**New Data on Cancer Prevalence
and a Natural Cancer-Fighting
Combo (OPCs and Curcumin)
(3 slides)**

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WHO on Cancer

- The World Health Organization estimates there will be about 18 million new cancer cases and 9 million deaths from cancer this year, worldwide
- Lung cancer kills the most people followed by colon cancer and then breast cancer in women
- 1 in 5 men and 1 in 6 women will develop cancer in their lifetime

A few statistics on cancer risk

- **Tobacco use** is the single largest preventable cause of cancer in the world – it is associated with over 20% of all cancer deaths, and as much as 90% of deaths due to lung cancer specifically
- **Obesity** increases risk of breast cancer by up to 60%, and colon cancer risk by 50%
- **Sugar** feeds cancer. In an animal model of breast cancer, regular sugar consumption tripled the size of cancerous tumors.

Cancer-fighting Combination

- New research looks at the combination of OPCs from grape seed extract and curcumin
- Researchers compared no treatment versus curcumin, OPCs from grape seed, or a combination of OPCs and curcumin for colorectal cancer (animal model)
- Results: Both OPCs and curcumin were effective at preventing tumor growth, and the OPC/Curcumin combination was even more effective
 - Tumor size reduced by 50-70% when used individually and by 75% when combined (versus control)