

Featured Topic: Andrographis (8 slides)

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Andrographis – History of Use

- Andrographis is a plant native to India and south Asia
- Widely used in Ayurvedic medicine since ancient times and in Traditional Chinese Medicine for over 1000 years
- Known as the “King of Bitters”
 - Bitters are bitter tasting herbs – used traditionally for digestion and other illnesses
 - Other bitter herbs are dandelion, wormwood, and goldenseal

Andrographis is the “King of Bitters” because it does it all...

- Antibacterial
- Antiviral
- Liver protectant
- Anti-cancer
- Immune stimulating
- Anti-inflammatory
- Anti-diarrhea
- Anti-diabetic
- Anti-hypertensive (lowers blood pressure)

Best Known Use – Immune System (cold and flu prevention)

- In a clinical study, andrographis relieved the intensity of key symptoms (fatigue, sore throat, runny nose, sleeplessness) in **just two days**
 - By the 4th day, there was a significant decrease in all symptoms (including headache, earache, phlegm production and the frequency/intensity of coughing attacks)
- In a study of 223 people with upper respiratory infections, the andrographis group saw a dramatic decrease in cough, headache, sore throat, and disturbed sleep on day 3 – the placebo group had no improvement and some had their symptoms get worse

Antiviral and Anti-Bacterial

- Researchers in Thailand found that a compound in andrographis inhibited the herpes simplex virus (causes cold sores) even 12 hours after infection
 - Also found to work well with acyclovir – a drug commonly used for cold sores, shingles, and genital herpes
- Andrographis can also stop the growth of harmful bacteria
- Prevents the bacteria from replicating and boosts the body's own natural antibacterial and antiviral defenses
 - Cytotoxic T cells, natural killer (NK) cells, and phagocytes

Anticancer

- Up to 90% inhibition of breast cancer cells (cell study) without harming normal cells
- 40% reduction in tumor growth in an animal model of esophageal cancer
- Showed a 60-90% inhibition of prostate cancer cells, and up to an 80% reduction in the ability of prostate cancer cells to spread (cell study)
- Human clinical trials are now in progress to study andrographis' effects on colon cancer AND bronchitis, tonsillitis, rheumatoid arthritis, multiple sclerosis, and type 2 diabetes (all listed in the clinicaltrials.gov database)

Oncol Lett. 2018 Apr;15(4):5301-5305. doi: 10.3892/ol.2018.7941. Epub 2018 Feb 2.

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Toxicol Lett. 2013 Sep 12;222(1):23-35.

Oncotarget. 2017 Nov 11;8(62):105860-105872

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Liver Protection

- Andrographis versus silymarin from milk thistle in an animal model of liver damage – andrographis decreased free radical activity in the liver by 55% - better results than silymarin!
- Inhibited hepatitis C virus by almost 90% (cell study)
- Reduced elevated liver enzymes by 62% (animal model of liver damage)

Joint Support

- Reduces activity of inflammatory enzymes including COX
- In an animal model of arthritis, andrographalide from Andrographis reduced arthritis symptoms (measured by a standardized arthritis score) by 80%
- In a placebo-controlled clinical study on patients with rheumatoid arthritis, andrographis reduced joint swelling and tenderness, and reduced the inflammatory factors associated with arthritis

Andrographis – how to use it

- Take 400 mg of andrographis, standardized to 80 mg andrographolides, daily
- Use for
 - Arthritic joint pain
 - Cancer
 - Cold and flu prevention and treatment
 - Energy
 - Mental function
 - And almost everything else
- No significant adverse have been reported

Nutrient of the Day: Probiotics
(for Dogs)
(2 slides)

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Probiotics for Dogs

- Just like people, dogs are healthiest when their gastrointestinal system has a high level of beneficial bacteria
- Boosting the level of good bacteria in your dog's intestines
 - helps them digest food and absorb nutrients more effectively
 - reduces gas [you don't know suffering until you have been trapped in a room with a gassy dog!]
 - Controls intestinal inflammation (inflammatory bowel, etc)

What to know about probiotics for dogs

- A dog's stomach is much more acidic (some sources say 10 times more acidic) than a human stomach
- This is why dogs can eat raw food, or food that would make a human really sick – their stomach acid kills off bacteria
- Therefore, any beneficial probiotic bacteria **must be able to tolerate a dog's acidic digestive system**
- Two proven probiotics for dogs that are acid-resistant
 - *Bifidobacterium animalis*
 - Shown to speed dog's recovery from acute diarrhea (reduced recovery time by 40%)
 - *Bifidobacterium bifidum*
- Administer 2.5 billion of a combination of these probiotics daily with your dog's regular meal

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Preventing Muscle Loss (3 slides)

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Lack of sleep = less muscle tissue

- Adults can lose up to 8% of their muscle mass each decade after age 40
- In a new study, researchers found that **even one night of poor sleep** can increase fat deposits and break down muscle tissue
- Researchers tested 15 healthy young men twice – once after a good night's sleep and once after a night of no sleep
- Results: genetic pathways associated with **fat storage** were up to 7% more active after no sleep, and pathways associated with **muscle breakdown** were also more active

Consequences of muscle loss

- Loss of muscle strength increases risk of falling
 - Falls are the leading cause of death due to injury in older adults; 87% of all fractures in older adults are due to falls.
 - 40% of people admitted to a nursing home for a fall will never return to independent living; 25% will die within a year
- Loss of muscle strength makes it harder to stay physically active and increases risk of at least 35 chronic diseases – from arthritis to stroke.

To preserve muscle: sleep, eat protein, and exercise

- Older adults need about .5 grams of protein per pound of body weight OR MORE daily
 - For a 130 lb person, that is a minimum of 65 grams of protein daily; a 180 lb person should get 90 grams or more daily
 - A 3 oz hamburger patty has about 20 grams of protein; 3 oz chicken breast (grilled) is 26 grams
 - In a three year study of older adults, versus people with high protein intakes, those with the lowest protein intakes had a 40% increased loss of muscle mass
- A recent study found that older adults who **strength trained** at least twice a week had
 - **46% lower odds of death** for any reason than those who did not do strength training
 - **41% lower odds of cardiac death** and **19% lower odds of dying from cancer**

Yo-Yo Dieting is Bad for Your Heart (1 slide)

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Up and Down the Weight Scale is Hard on the Heart

- Researchers collected data from 485 women, average age 37, including **how many times they lost 10 lbs or more, only to regain it within a year**
- Results: 73% of the women reported at least one episode of yo-yo weight loss – some had done it as many as 20 times
- Versus women who had more consistent body weight, women who experienced yo-yo weight loss and gain were **65% less likely to have an optimal heart health profile** (cholesterol and glucose levels, smoking, BMI)
- Researchers theorize that rapid weight loss leads to loss of muscle versus fat, but rapid regain causes an increased buildup of more fat tissue – changing overall body composition and increasing risk of heart disease

Olive Oil for Stroke Prevention (1 slide)

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Olive oil for reduced risk of stroke

- Researchers divided 63 adults with obesity, but no history of heart disease, diabetes, or smoking, into groups based on how often they consumed olive oil
 - Once a week or less
 - 1-3 times a week
 - 4 or more times per week
- Researchers measured each participant's level of platelet activation
 - Platelet activation is one of the first steps in blood clotting
 - Clotting for wound healing = necessary and beneficial
 - Abnormal clotting in blood vessels = increased risk of heart attack/stroke
 - Obesity is associated with increased levels of platelet activation – one study found platelet activation was **77% higher** in obese women versus normal weight women
- Results: obese people with the highest intake of olive oil had lowest platelet activation, meaning reduced risk of heart attack!