

**Featured Topic:
Black Mustard Seed
(4 slides)**

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Medicinal Mustard

Black mustard seed (*B. nigra*) is in the same family as cruciferous vegetables, including:

- Cabbage
- Broccoli
- Turnips
- Cauliflower
- Kale
- Brussels sprouts

These plants all contain a number of compounds with significant health benefits that are especially potent for cancer prevention.

Black Mustard Seed: Rich in Sinigrin

- The glucosinolates are a powerful group of compounds found in plants in the mustard family
- There are over 100 different glucosinolates: **sinigrin** is one of the most potent
 - Sinigrin converts in the body into another metabolically active compound: allyl-isothiocyanate
- While broccoli and brussels sprouts contain some sinigrin, one of the richest sources is **black mustard seed**
- Sinigrin is
 - Anti-inflammatory
 - Antibacterial
 - Antifungal
 - Antioxidant
 - Anticancer

Research on Black Mustard Seed

- Traditional remedy in India
- Prescribed for everything from cancer to hiccups
 - Liver disease, appetite stimulant, hair loss, colds, headache, toothache, and more
- Modern research on Black Mustard Seed and its key compounds:
 - 50% reduction in malaria parasite load (animal model)
 - 20% reduction in blood sugar levels (animal model of diabetes)
 - Comparable to silymarin from milk thistle in protecting against liver toxins (animal model)
 - Inhibited bladder cancer growth by 35% and blocked muscle invasion by 100% (animal model)

Black Mustard Seed – how to use and what to look for

- 100 mg of black mustard seed standardized to 25% glucosinolates daily
- Use for: cancer prevention – especially bladder cancer, gastrointestinal and colorectal cancers, inflammation, diabetes, and more
- For extra power, take a combination of 500 mg curcumin and black mustard seed (standardized to glucosinolates) up to three times daily

Flu Update (4 slides)

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2017-2018 one of the top 3 worst flu seasons ever – and it still isn't over

- Big season for the flu – first week of January marked **the most flu cases ever recorded** for this time of year
- Centers for Disease Control predicts another 11-13 weeks of flu circulating around the country
- CDC is also starting to see new flu strains emerging in addition to the H3N2 virus (which is the most common flu strain this year)
- Flu vaccine is particularly ineffective against H3N2
 - Most flu vaccines are grown on eggs; H3N2 grows poorly on eggs so doesn't make an effective vaccine, and H3N2 changes so rapidly that by the time a vaccine is made it is no longer a match for the virus

Viral Illnesses

- Influenza (the flu) and the common cold, as well as shingles, herpes, and some types of hepatitis and pneumonia are caused by **viruses**
 - **Did you know?** The influenza virus can survive as long as 48 hours on stainless steel or hard plastic; survival on cloth, paper, or tissues is about 8-10 hours
- You should know: **antibiotics DO NOTHING to stop cold and flu viruses**
- However, several natural medicines have powerful effects against viruses

Elderberry is a natural antiviral drug

- Elderberry acts against viruses in two ways:
 - PRIMARY: neutralizes virus particles so that they cannot enter host cells
 - SECONDARY: causes the immune system to activate, which can help control the spread of a viral infection
- Specifically, elderberry has been found effective against
 - **Influenza Type A and B**
 - Herpes type 1
 - HIV
- BONUS: Elderberry has ALSO been shown to have some **antibacterial** activity

Elderberry protects against cold and flu

- A recent study in Australia found that taking elderberry while traveling **cuts risk of colds or the flu in half**
- 312 passengers flying from Australia to overseas destinations, economy class
 - Half received Haschberg variety elderberry extract; half received placebo
 - All passengers surveyed for cold and flu symptoms before, during and after their flights
- The elderberry group had **half as many illness** (cold or flu) as the placebo group
- For those in the elderberry group who did get sick, their **illness lasted only 2/3 as long** as the placebo group, and their **symptoms were not as severe**

Stop viral infections with elderberry

- Elderberry can be taken daily, especially during cold and flu season
- 200 mg daily, up to 1200 mg (when needed)
- Blend with other immune nutrients:
 - Vitamins A, C and D
 - Zinc, Calcium, Magnesium
 - Mixed bioflavonoids from citrus
- Other ways to stop a virus:
 - Andrographis
 - The global flu epidemic of 1918 was one of the most devastating infectious outbreaks in world history, killing 50 million people worldwide. No country escaped its onslaught but in India, Andrographis is credited with stopping the spread of the deadly virus.
 - Take 275 mg of **andrographis blended with echinacea and pelargonium** daily

**Reverse heart disease with exercise
and Vitamin D
(2 slides)**

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Exercise is good for the heart

- Researchers spent two years studying 53 adults ages 45-64 who were healthy but had no history of regular exercise
- Participants gradually increased exercise activity until they were doing weekly:
 - One session of 4x4 high intensity interval training
 - 2-3 sessions of moderate intensity exercise
 - One session of strength training
 - One long session of aerobic exercise (tennis, cycling, dancing, brisk walking)
- Result: 18% improvement in oxygen intake during exercise, and a 25% improvement in heart muscle
- The best results occurred when exercise routines started BEFORE age 65 – after age 65 heart tissue is less able to strengthen and repair itself after years of sedentary behavior

Vitamin D is good for the heart

- Randomized, controlled trial with 70 vitamin D deficient participants receiving either placebo or 600-4000 IU of vitamin D for 12 weeks
- Results
 - Arterial stiffness *increased* 2% in the placebo group, and a very small increase of 0.1% in the 600 IU group
 - Arterial stiffness *decreased* 2% in the 2000 IU group, and **decreased 10%** in the highest Vitamin D group, 4000 IU daily
 - All participants received Vitamin D as vitamin D3, cholecalciferol

The Benefits of a Big Breakfast, and Why Some People Just Can't Eat Carbs (2 slides)

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Go Big for Breakfast

- Eating a small breakfast, or no breakfast at all, was recently linked to an increased risk of artery plaque formation
- **Plaque formation risk was 40-50% higher** for those eating toast or pastries with coffee, and even higher for breakfast skippers, versus big breakfast eaters
 - Big breakfast = fruit, healthy fats, and protein
- Eating little or nothing in the morning can lead to unhealthy food choices and more calories later in the day

Why some people just can't eat carbs without gaining weight

- Researchers have found a genetic variation associated with carbohydrate intake, insulin levels, and weight gain
- After looking at data from over 26,000 people, researchers found that a certain genetic profile was associated with higher than normal insulin levels after glucose intake
- This genetic profile was also strongly associated with increased body-mass index
- In other words, in two people of otherwise equal body types eating the same amount of carbohydrates, the person with the genetic predisposition for higher insulin levels would weigh up to 7 lbs more
- A lifetime of carbohydrate intake in a person with the genetic tendency to high insulin levels = diabetes and obesity

Help for leg cramps (1 slide)

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Painful legs at night

- Up to 60% of adults experience cramping pain in the legs (a charley horse) at night
- Most cramps last about 9 minutes, and can leave muscles sore for up to 24 hours
- Factors that may be a cause include: dehydration, side effects of medications, and pregnancy, but **muscle fatigue** and **nerve problems** are the most common cause
- Natural solution: calcium lactate
 - 250 mg of calcium lactate, with 50 mg of magnesium and 6 mg of zinc
 - Replenishes calcium in muscle tissue to relieve cramping and pain

Diet and Risk of Colon Cancer (1 slide)

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Inflammatory foods increase risk of colon cancer

- Researchers gathered data from 121,000 people who completed food questionnaires every four years for 25 years
- The researchers then compared the questionnaires of people who developed colorectal cancer with those who didn't
- Results
 - Diets high in inflammatory foods were linked to increased risk of colorectal cancer
 - Processed meat, refined flour, and sugary drinks were the foods most linked to inflammation
 - People eating diets high in these foods were **37% more likely to develop colon cancer** and **70% more likely to develop rectal cancer**