

Probiotics and Antioxidants

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What are Probiotics and How do They Help You?

- “Live microorganisms that when administered in adequate amounts, confer a health benefit to the host.” (the International Scientific Association for Probiotics and Prebiotics)
- “Probiotic” comes from the Greek words *pro* meaning “promoting” and *biotic* meaning “life”
- Promote a healthy digestive tract, prevent lactose-intolerance, promote a healthy immune system, especially improve absorption of calcium and B vitamins, lower cholesterol, prevent tooth decay, etc.



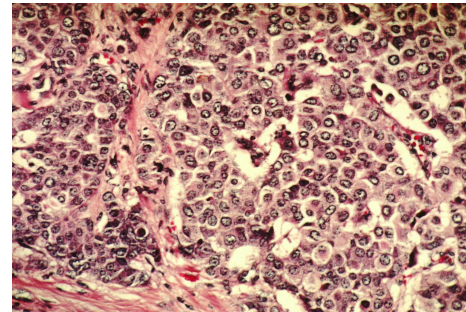
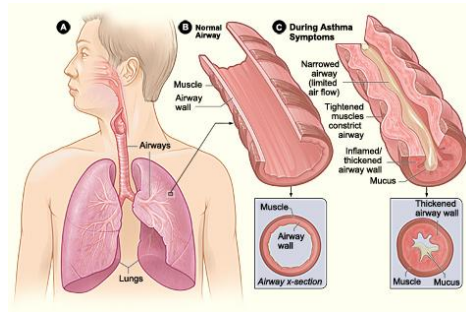
Where do Probiotics Come From?

- Historically: dirt and food
 - Through not cleaning food and preservation through fermentation
- Now: foods such as sauerkraut, kimchi, lacto-fermented fruits and vegetables, unpasteurized yogurt, kefir and cheese, unpasteurized meats, supplements, etc.



What Happens When There is a Lack of Probiotics?

- An imbalance of the gut microbiome compromises mental and physical health
- Symptoms include depleted energy, poor skin, frequent colds and flu, foggy thinking, stunted metabolism, mood disorders, etc.
- According to some scientists eventually causes heart disease, obesity, asthma, cancer, etc.

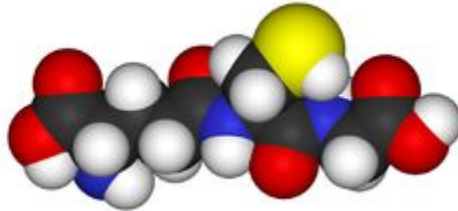


Can you Have too Many Probiotics?

- Is possible to suffer from gastrointestinal problems such as nausea, diarrhea gas, bloating, etc.
- However, is impossible to overdose on probiotics

What are Antioxidants and How do They Help You?

- Man-made or natural substances that may prevent or delay some types of cell damage caused by oxidants.
- There are multiple types of antioxidants with ranging benefits
 - I.e.: antioxidant enzymes, antioxidant vitamins, antioxidant phytochemicals, etc.
- Neutralize and remove free radicals from the bloodstream, benefit eye, heart and urinary tract health, maintain prostate health, protect skin, protect cell membranes and cellular Dna from mutation, etc.



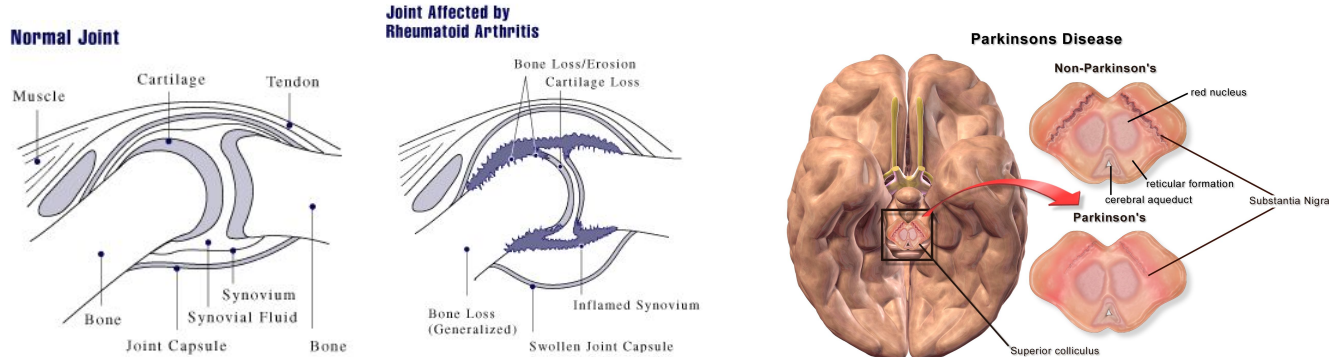
Where do Antioxidants Come From?

- Antioxidants are produced naturally in the body but are generally outnumbered by the amount of free radicals
- Outside sources consist of fresh, organic vegetables, fruits, nuts, herbs and spices, organic green tea, etc.



What Happens When There is a Lack of Antioxidants?

- General symptoms include fatigue, poor memory, changes in skin and hair, impaired wound healing
- Also linked to cancer, Alzheimer's disease, Parkinson's disease, rheumatoid arthritis, liver and heart disease, etc.



Can you Have too Many Antioxidants?

- Possible to start acting as pro-oxidants and therefore induce oxidative stress
 - Pro-oxidants: compounds or agents capable of generating toxic oxygen species
 - Oxidative stress: disturbance in balance of free radicals and antioxidants
- Antibiotic's role is reversed and creates more damage