# NUTRITIONFACTS

## **NUTRIGENOMICS**

Diet and Your Genes

**Nutrigenomics** is the study of how the foods we eat affect our genes and how our unique genetic makeup responds to nutrients and other compounds in food.

Scientists and researchers long determined that diet and nutrition have an effect on chronic disease. Through knowledge of our genetic makeup, we can now utilize nutrients and phytochemicals found in everyday food to influence our genetic expression, and therefore chronic This means that personalized disease. nutrition optimization can extend a state of optimal health, even in individuals who may be genetically predisposed to certain illnesses.

In a way the concept of Nutrigenomics brings new meaning to the phrase 'you are what you eat'. What we eat directly influences how we feel. Western diets, fast food, and poor dietary habits interfere with normal signals sent to our body's cells creating negative genetic expression, and leading to premature aging and chronic illness. These cellular signals are mediated by enzymes called 'kinases', which help to direct genetic expression. Naturally occurring Selective Kinase Response Modulators (SKRMs) can work to modulate kinase signalling into balance, which in turn restores healthy cell signalling, gene expression, and may even reverse the effects of chronic illness. These SKRMs are incorporated into nutraceutical and medical foods to help with chronic illness.



The foundation of **Nutrigenomics** is based on five principles:

- 1. In some circumstances diet can be a serious risk factor for many diseases;
- 2. Dietary compounds can act on the human genome to alter gene expression;
- 3. An individual's genetic makeup may determine the degree to which diet influences healthy and disease states;
- 4. Diet-regulated genes may play a role in the onset, incidence, progression, and/or severity of chronic diseases;
- 5. "Personalized Nutrition" through knowledge of genetics, nutritional status, and nutritional requirements can help to prevent, mitigate, or even cure chronic disease.

**METAGENICS** is a science-based nutraceutical company that was founded in 1983. Their mission is to enhance genetic expression and improve health through nutrition. Metagenics uses only high quality ingredients in their products, based on scientific evaluation, comprehensive safety reviews, and human clinical evaluation. Visit <a href="https://www.metagenics.com">www.metagenics.com</a> for more information.





For more information about key nutrients, organic produce, and fresh recipe ideas, please visit:

http://www.fruitandveggieguru.com

#### TASTE THE RAINBOW

#### Consuming a Colourful Diet Can Improve Your Health

Fruits and vegetables contain many vitamins, minerals, and phytochemicals that are important for your health. Phytochemicals are those compounds that give produce their colour and have numerous benefits, including helping to reduce the risk of certain types of cancers. Try to incorporate foods from each of the five main colour groups into your diet:

**BLUE/PURPLE:** Blue/purple fruits and vegetables contain anthocyanins and phenolics. These compounds are beneficial for health of the urinary tract, memory function, and healthy aging. Sources include: blackberries, blueberries, grapes, plums, raisins, purple cabbage, and eggplant.

**GREEN:** Green produce contains lutein and indoles, which help to promote vision health, as well as strong teeth and bones. Sources include: green apples and grapes, kiwi, avocado, leafy greens, broccoli, asparagus, green beans, cucumbers, green peppers, and spinach.

**WHITE:** This group includes tan and brown fruits and vegetables, known for their content of allicin, a phytochemical found in high amounts in onions and garlic. Allicin is particularly beneficial in promoting heart health. Other sources include: bananas, brown pears, dates, cauliflower, ginger, turnips and mushrooms.

YELLOW/ORANGE: Yellow/orange fruits and vegetables contain high amounts of vitamin C, carotenoids, and bioflavenoids. These compounds promote a healthy immune system, vision health and heart health. Sources include: apricots, canteloupes, oranges, nectarines, butternut squash, carrots, pumpkin, and sweet potatoes.

**RED:** Red produce contains lycopene and anthocyanins, which help to promote hearth health, memory function, and urinary tract health. Sources include: red apples, cherries, cranberries, raspberries, strawberries, beets, red peppers, rhubarb and tomatoes.

## NEED MORE FRUITS AND VEGETABLES?

Here are just a few simple tips to incorporate more fruits and veggies without a major overhaul to your diet:

- Add fruit such as bananas or blueberries to your morning cereal.
- Mix fruit and nuts with plain yogurt instead of cereal for breakfast.
- Blend a smoothie of your favourite fruits as a meal replacement.
- Add fruit to your salads, such as mandarin oranges, apple, or nectarine.
- Serve a stir-fry over spinach or romaine lettuce instead of rice or potatoes.
- Wrap sweet potatoes, sweet corn, or sweet onions in foil while grilling to serve with meat. They caramelize in the heat and make a great addition to a meal.
- Add nutrition to your omelets by incorporating bell peppers, broccoli, spinach, tomatoes, onions, etc.
- Spruce up your sandwiches with some lettuce, bell peppers, tomatoes, cucumbers, or your favourite veggies.
- Squash, zucchini, carrots and extra tomatoes make a great addition to your spaghetti sauce.
- Add more vegetable toppings to your pizza to create a heartier meal.





There is no need to change your whole diet in order to eat healthier.

Be creative by incorporating fruits and vegetables into meals you already enjoy!

#### **QUICK AND EASY GARDENING TIPS**

AVOID UNNECESSARY ACHES AND PAINS

- ALTERNATE heavy and light chores
- CHANGE HANDS to reduce strain
- CHECK YOUR POSITION and change it often. Kneel, stand, sit and relax to take a break.
- LIFT RIGHT by keeping your back straight and bending your knees. Carry the load close to your body, and avoid heavy lifting immediately after bending or kneeling.
- **RAKE RIGHT** by placing one foot in front of the other to ease strain on your back. Switch legs and hands periodically.
- KNEEL TO PLANT. Use knee pads or kneeling mats to reduce strain on your

### REENA PATHAK, D.C.

To schedule an appointment, please call:

(519)987-4261



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