Maternal Malnutrition
(3 slides)
Lasting impact of maternal malnutrition

• Researchers examined the DNA of children born to Dutch mothers who were pregnant during the “Hunger Winter” of 1944-1945
• The children had changes to their DNA associated with impaired growth, development and metabolism – changes still evident 59 years later!
• Children of malnourished women are more likely to have impaired mental function, short stature, lower resistance to infections, and a higher risk of disease and death throughout their lives
Modern maternal malnutrition

• Some researchers report that as many as 95% of pregnant women – even women taking a prenatal vitamin – have low vitamin D levels

• For babies this can mean:
  – Low birth weight
  – Poor lung function and breathing problems
  – Weak bones

• About 30% of women in the US are iodine-deficient, which can lead to children with poor mental function or even mental retardation. Even “marginal” iodine deficiency can lead to decreased brain function.

• 40-50% of pregnant women are iron deficient; new research has linked iron deficiency in the mother to increased risk of autism in her children
Crucial nutrients during pregnancy

• In addition to vitamin D, iodine and iron, these nutrients are also critically important during pregnancy
  – **Folic acid** – prevents neural tube defects (damage to the spinal cord)
  – **DHA** omega 3 fatty acid – crucial for the developing brain
  – **Protein** – low protein intake during pregnancy can lead to babies with impaired glucose tolerance that lasts for the rest of their life
Preventing Skin Cancer

Did You Know?
Our skin is the largest organ of the body. Skin cancer is the most common type of cancer.
(2 slides)

Terry Talks Nutrition
Hibiscus to prevent Melanoma

• Melanoma is less common than other types of skin cancers, but much more dangerous – 75% of deaths from skin cancer are due to melanoma
  – Rates of melanoma have doubled in the last 20 years
• Researchers have found that extracts from the leaves of Hibiscus plants may fight melanoma
• They exposed normal human cells and melanoma cells to hibiscus leaf extract
• After 24 hours, hibiscus had destroyed 50% of the melanoma cells without harming the normal cells
• Hibiscus is a source of the anti-cancer compound, epicatechin gallate (EGC), which is also found in green tea
Non-melanoma skin cancer

• Researchers in Australia (where over 50% of the population have skin cancer at some point in their lives) have found a simple way to prevent it – vitamin B3, nicotinamide.

• 500 mg of nicotinamide, taken 2 times daily by people who had previously experienced skin cancer, significantly reduced recurrence of non-melanoma type cancers:
  – new diagnoses of basal cell carcinoma were reduced by 20%
  – squamous cell carcinoma was reduced by 30%
  – During the year-long study, the patients in the placebo group developed a median of 2.5 new skin cancers, whereas those in the nicotinamide group had a median of 1.77 new cancers.
Grape Seed and Chemotherapy
Cisplatin

• New research looks at the cancer drug, cisplatin
• This drug is very strong – it can cure up to 90% of testicular cancer cases – but also very toxic
• 30% of people taking cisplatin will have long term damage to their kidneys
• Researchers have been looking for ways to minimize the side effects of cisplatin in order to take advantage of its powerful ability to stop cancer
Grape Seed Extract and Cisplatin

• New study looks at the interaction between grape seed extract and cisplatin
• Mice were divided into 4 groups
  – Control
  – Cisplatin
  – Grape seed extract
  – Cisplatin AND grape seed extract
• Results
  – The group receiving cisplatin AND grape seed extract had better kidney function and reduced levels of kidney damage versus the cisplatin only animals
• Other research has found that when grape seed extract was administered with cisplatin it neutralized the free radical damage and glutathione depletion caused by the drug
• Consider combining grape seed extract with curcumin, another natural ingredient that can reduce the adverse effects of chemotherapy