Nutritional Value of Local Foods or How to Provide Adequate Essential Nutrients for Humans

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Nutritional value starts with the understanding of what good nutrition means.
4 Core Nutrition Concepts
“Too often forgotten”

1. **Homeostasis** – continual replacement of cells and tissues

Homeostasis Requires ....
4 Core Nutrition Concepts

“Too often forgotten”

1. Homeostasis – continual replacement of cells and tissues

2. Essential Nutrients
   a) Substances the body requires for normal function
   b) CANNOT make from other substances or enough to meet needs
No single food, food group or “superfood?!@#” contains all of the essential nutrients

Consuming a wide variety of foods - best chance to meet essential nutrient requirements
4 Core Nutrition Concepts
“Too often forgotten”

1. Homeostasis – continual replacement of cells and tissues
2. Essential Nutrients
3. Bioavailability
Nutrient Bioavailability

— The amount of an ingested nutrient that can be digested, absorbed, and assimilated.

— Amount consumed does NOT = amount absorbed into the body
Spinach does not equal Beef in terms of Iron Bioavailability

- Total Iron = 2.43 mg Iron / 3 oz
- Total Iron = 2.21 mg Iron / 3 oz

Approx. Bioavailability
- Spinach: 2% = 0.049 mg Iron
- Beef: 20% = 0.442 mg Iron
4 Core Nutrition Concepts

“Too often forgotten”

1. Homeostasis – continual replacement of cells and tissues
2. Essential Nutrients
3. Bioavailability
4. Food Composition
4. **Food Composition**

Knowing what nutrients are in foods will allow us to make appropriate recommendations based on science - not superfood hype.
Food Composition Pioneers

Carrie D Miller, Bluebelle Standall, Nao Wenkam Stacy K. Evensen
Why local?
Distance = Time to Freshness
Freshness = >> Vitamins
Freshness [especially in produce generally means more vitamins].
Freshness Matters

• Available within hours or a day of harvest.
• Farmers can harvest more fully mature produce.
• Freshness = translates into better taste and texture for the majority of vegetables.

• MORE NUTRIENTS
Examples of Local Foods that provide important nutritional benefits
Mango –
b-carotene and Vitamin C
Tomatoes & Citrus
Vitamin C
Consuming Fruit instead sugar cane offers more

Banana – Potassium
Chinese cabbages – Good bioavailable calcium
Seaweed - minerals!!
Coffee potassium
Distance = Need to build Sustainability Infrastructure
Breadfruit
Energy
Fiber
Local milk does not need repasteurization
Rising CO2 Poses Major Threat to Human Nutrition, Study Says

Crops that provide dietary zinc and iron will have significantly reduced concentrations of those nutrients by 2050.

By Melissa Malamut | Hub Health | May 20, 2014 1:31 pm
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Intestinal Tract

Iron Deficiency in a Child – Naiman 1964

Slightly Abnormal – e.g. low Protein
Possible Nutritional Causes of Non-Alcoholic Fatty Liver