Food For Thought - Is It Time To Eat Yet?

by Edith Hogarth BSc

The ongoing debates and controversies surrounding one of the most important aspects of our existence – food - are mind boggling: is climate change dramatically altering our food sources and availability; do we eat organic or non-organic; do we avoid genetically modified crops; do we reduce our reliance on wheat, barley, and soy crops; do we stop using hormones and antibiotics for increased food productivity; do we reduce meat, poultry and dairy consumption; do we stop eating large fish and reduce our intake of 'toxic' seafood; do we reduce our fructose-sucrose consumption; do we move away from conventional agricultural and fish farming practices; do we incorporate 'bugs' and insects into our diets; do we buy locally sourced foodstuff; do we address aggressive invasive plant and animal infestations; do we stop frying and barbecuing foods; do we stop storing food in plastic containers; do we stop buying canned and packaged goods with BPA, BPS, BPF linings; do we rethink our reliance on synthetic vitamin supplements; do we address malnutrition, food allergies, sensitivities, and obesity - one person at a time; do we take a precautionary approach to what we consume and where we grow foodstuffs; are we (genetically speaking) impacted by what our grandparents ate; are we undergoing 'evolutionary' changes to adapt to what we are eating???

These questions and more have been repeatedly put to farmers (big and small), researchers, biologists, ecologists, caregivers, doctors, nutritionists, naturopaths, psychologists, pharmaceutical companies, and even government officials and regulatory organizations over the years. There is still no resounding consensus or a simple "Yes" or "No" response to all these questions, to which all would agree. Even if they did, would we all then act accordingly? Is it even possible to do so, on a global scale, as the distribution and availability of 'good' food seems to be increasingly threatened by different natural and human-generated antagonist events?

"Facts" and "proof" seem to change; anecdotal evidence and testimonials are not globally reliable; and the average consumer is encouraged and enticed to buy more and more, by mind-blowing marketing campaigns and designer labeling. Food has certainly become a complex issue and business everywhere, and it cannot be avoided nor ignored, anywhere.

With increasing human activities that promote mega-community developments, and the reduced availability of 'healthy' growing spaces, surviving and staying well is an immense challenge, more so then we ever imagined. Magic pills and technology are not going to solve all our problems. Collectively, we just might need to consider that repeatedly doing the same thing over and over again, using ineffective tools and methodologies, won't bring about the positive results in food production and maintenance we need. A rethinking and change to our game plans are needed!

Misuse and inappropriate use of land and water compound the problems surrounding diversified food production. Many smaller mixed family farms, which are all extremely important and necessary, are slowly losing their battles. We can't be complacent into believing that big farming and agricultural corporations and the mega grocery and vitamin stores down the road will support us all indefinitely, when healthy (varied) food production is waning in local areas. Governments do not have all the solutions either, to ensuring the availability and protection of stable food and safe water resources.

A different grass-roots approach might be that *individually,* we re-focus our attention towards ensuring food ***quality*** (eliminated residual pesticides, better perceived taste, and less toxic chemical ingestion) and ***diversity*** (reduced mono-type tilled crop rotation) are addressed, versus quantity of the foods that we grow and eat; spend little if anything, on synthetic vitamins that don't work; and determine ***when*** is the best time to eat *quality* foods over the course of our lives.

Early man was nomadic. Being a hunter and gatherer meant that food consumption was dictated by location, environment, time of day, food source availability, and caloric need. Three substantial varied meals spaced over the course of each and every day, definitely wasn't the norm. In several underdeveloped parts of the world, this still is noticeable.

Agriculture changed man's way of life over the centuries, and now we're seeing that the continuing use of some of those very same practices, (or introduction of them) are producing foodstuffs that don't have the same caloric or *quality* values we require, and they are destroying the land, water, essential animal habitats and the environments we all need to share in order to thrive.

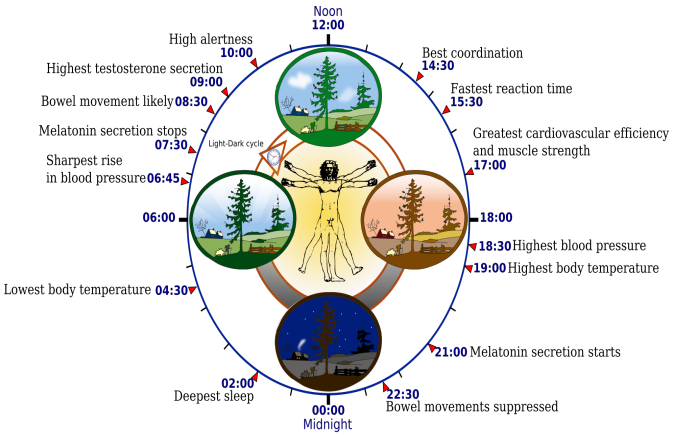
Whatever we put into our soils, water and air, we also ingest – everything from good and bad bacteria and viruses, to noxious toxic chemicals. If the land, water and air around us are not 'healthy,' what is produced therein cannot be 'healthy, 'so how can we expect to be healthy? Grandmother was not wrong – we are

what we eat, breathe and drink! The negative effects of our metabolic and biological processing of foodstuff for nutrients (along with the good ones) are being encoded, and genetically, that information is being transferred multi-generationally. Will our bodies adapt to what we consume over time, or will we be faced with an onslaught of new cancers and illnesses that cannot be prevented? Synthetic supplements aren't and won't be a viable substitute or solution for *good* food.

Today, we have the ability to 'scientifically' ascertain (and change) some of the nutritional benefits that can be derived from foods made available to us. We can pre-determine whether or not, what we're to consume will also be more than just palatable, leave us feeling unsatisfied, or harm us. We also have the ability to *individually reduce the amount of unnecessary calories we are consuming, or needlessly wasting and not sharing*. This is important and even more essential to consider when we're convalescing or dealing with serious medical conditions or life-changing, traumatic events.

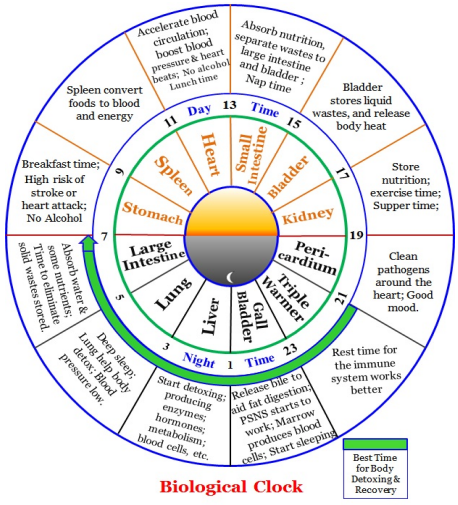
Certainly, there will be a need for several solutions - some options considered better than others in all corners of our world. Many can come from our backyards and balconies! For those foods grown in one part of Canada, we would expect to see differences in *quality* from similar foods grown in other areas of the country, just as we would of other foods grown in different areas of the Far East, South America, Europe or Africa. Differences in altitude, soil conditions, drought tolerance, farming practices, etc…impact us all, individually and globally.

Ultimately, nutritionally speaking, in order to 'get the best bang for our buck,' we first need to understand that our bodies, as we age, utilize the specific nutrients we need (most effectively and efficiently), during specific times during a day, following circadian rhythms and the human biological clock.



The Circadian Rhythm
Wicipedia

Circadian rhythms are important in regulating and co-ordinating internal metabolic, hormonal, neuroelectrical, and biological processes just as much as they are in coordinating with the environment, sleeping and feeding patterns.



Can nutrition-based/*quality* standardization tables be 'humanly' universal? Can they help demonstrate quantitatively, which and at what optimal time of the day or month, specific vitamins, minerals, and nutritional trace elements should be available for each man, woman, and child, to maintain a healthy lifestyle and/or address a chronic health condition? This writer feels there maybe some merit to these considerations, as we need to eliminate food waste at the same time.

The types of foodstuffs we grow, produce, and consume, should nutritionally 'fit'- ie. they should compliment the spaces in which they are grown and harvested, in order to produce the best *quality* of food. Greenhouses and vertical farms utilizing aeroponic, acquaponic, and hydroponic methodologies may provide some solutions over conventional tilling, fish farming and clearing practices.

Our eating habits (whether financially, physically or psychologically motivated) allow us to consume 'inappropriate' processed foodstuffs that are devoid of essential nutrients, because our brains have been chemically and hormonally stimulated/altered into believing that the foodstuffs taste good, so we should eat more, whenever we can, as much as we can. This may indeed be a root cause of many illnesses that supplements and some medical/surgical interventions won't fix over the long haul.

This writer is proposing the creation of scientifically verified Daily Food/Nutritional Intake Timetable that outline at what times during a day specific foodstuffs might be eaten, so that the best "current" nutritional/*quality* values of food can be maximized – to help us stay healthy.

A Monthly Food/Nutritional Intake Timetable may account for latitudinal differences (ie. timing related to sun exposure); and a 'Shift Workers' ' Timetable might address inherent problems associated with disrupted sleeping and eating patterns, due to shift work and long distance travel.

More work in the area of optogenetics, could result in the development of global Nutritional Intake Timetables that individuals (not just athletes) can follow anywhere, and record actual overall improvements in their health, thus documenting how to specifically reduce many chronic, food/nutrition-related illnesses.

In any event, an individual precautionary approach to food/waste management and consumption is surely warranted as our global population continues to increase and 'healthy' food production becomes more inadequate.

PARAMETERS FOR A DAILY FOOD/NUTRITIONAL INTAKE TIMETABLE
Based on Human Circadian Rhythm/Biological Clock

AGE: _____ GENDER: _____ HEIGHT: _____

WEIGHT: _____

ADDRESS/PROVINCE/COUNTRY:
_____

MEDICAL CONDITION(S) TO ADDRESS :
_____

TIME	ACTIVITY DESCRIPTION	FOOD (SERVING SIZE)	CALORIC VALUE	INDIVIDUAL NUTRIENT PROVIDED	NUTRIENT VALUE PROVIDED	DAILY NUTRIENT VALUE REQUIRED	AMOUNT TO CONSUME
0100h	**SLEEP**						
0200h	**SLEEP** (Deepest sleep)						
0300h	**SLEEP**						
0400h	**SLEEP**						
0430h	**SLEEP** (Lowest body temperature)						
0500h	**SLEEP**						
0600h	**SLEEP**						
0645h	**SLEEP** (Sharpest rise in blood pressure)						
0700h	**(Up with Sunrise)**						
0730h	**(Melatonin secretion stops)**						
0800h	***BREAKFAST*** **- Lean Protein, Fat, Complex Carbohydrates, Vitamins, Fiber (Ex. fruit, low-fat dairy, eggs, oatmeal, yogurt, rice, vegetables)**						
0830h	**(Bowel movement most likely)**						
0900h	**WORK/EXERCISE** (Highest testosterone secretion)						
1000h	**WORK/EXERCISE** (Highest alertness)						
1030h	***SNACK*** **- Carbohydrates, Protein, Vitamins, Fat, Fiber (Ex. quinoa, rice, eggs, fruit, vegetables)**						
1100h	**WORK/EXERCISE**						
1200h	**WORK/EXERCISE**						
1230h	***LUNCH*** **- Carbohydrates, Protein, Fat (Ex. pasta, chicken, salmon, vegetables)**						
1300h	***LUNCH***						
1400h	**WORK/EXERCISE**						
1430h	**WORK/EXERCISE**						

(Best co-ordination)

1500h WORK/EXERCISE

1530h WORK/EXERCISE
(Fastest reaction time)

1600h *SNACK* – Carbohydrates, Protein, Vitamins (Ex. fruit, vegetables)

1700h WORK/EXERCISE
(Greatest cardiovascular efficiency and muscle strength)

1800h *SUPPER* - Carbohydrates, Protein, Fat (Ex. chicken, fish, potatoes)

1830h (Relaxation)
(Highest blood pressure)

1900h WORK/EXERCISE
(Highest body temperature)

2000h WORK/EXERCISE

2100h (Relaxation)
(Sunset – onset of melatonin production)

2200h SLEEP

2230h SLEEP
(Bowel movements suppressed)

2300h SLEEP

2400h SLEEP

Additional References:

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