

## Sick and Tired: The Stress Connection

USING NATUROPATHIC PRINCIPLES TO RESTORE BALANCE AND PREVENT CHRONIC DISEASE

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## Outline

- General Adaptation Syndrome
- The physiology of stress
  - Short term effects
  - Long term effects
    - Nervous system
    - Digestion
    - Hormonal balance
    - Immunity
- Stress related conditions
- Strategies to restore balance
  - Rhythm and Routine
  - Diet
  - Stress management
    - Interrupting the stress response
    - Changing how we relate to stress
  - Exercise
  - Vitamins
  - Herbs

### News Flash: Stress is a Killer!



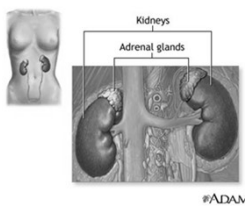

### News Flash: Stress is good for you!




### General Adaptation Syndrome (GAS)

- Hans Selye: Hungarian Endocrinologist
  - Alarm and Mobilization
    - Becoming aware of the stressor
  - Adaptation Stage
    - Preparation to fight the stressor
  - Exhaustion Stage
    - The negative consequences of unchecked stress begin to appear

### Fuelling the Demand




- The Adrenals
  - Salt water balance
    - Aldosterone
  - Fuel the stress response
    - ADRENAL-ine
    - Cortisol
  - DHEA: The mother hormone
    - Precursor:
      - Estrogen
      - Progesterone
      - Cortisol
    - Influences more than 150 biochemical reactions

### The Major Players


- **ADRENAL-ine**
  - Fuels the acute stress response
    - Raises blood pressure
    - Raises heart rate
    - Dilates pupils
    - Raise level of alertness
    - Lowers digestive secretions
- **Cortisol**
  - Fuels long term stress
    - Raises blood glucose levels
    - Stimulates breakdown of protein if needed
    - Anti-inflammatory action
    - Decreases calcium absorption
    - Depletes progesterone

### Stress and Memory



- High levels of cortisol
  - Impact encoding and retrieval of memory
    - Working and explicit memory
  - Decreases circulation to critical structures
  - Diminishes potential for learning
    - Hippocampus
    - Amygdala
    - Prefrontal cortex

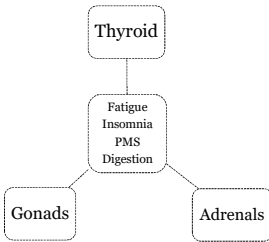
### Stress and Digestion



- **Digestive system**
  - One of two systems in the body that have the greatest nerve supply
- **Stress decreases:**
  - Digestive juices (acid, enzymes)
  - Beneficial micro-flora
    - Secondary to changes in pH


### Stress and Hormones

- **Hypothalamic-Pituitary-[adrenal/thyroid/gonad]**
  - Hypothalamus
  - Pituitary
  - Target glands
    - Hormones feed back to the brain to turn off their stimulation
- Long term stress reduces negative feedback
- Exhaustion is the end result
  - Glands cannot keep pace



### Stress and Immunity

- **Stress decreases**
  - Salivary IgA (sIgA)
    - Lowered first line defense
      - Suppressed for hours, even after short upsets
  - Linked to:
    - Ulcers
    - GERD
    - Crohn's, IBS
    - Eczema, allergies, asthma
    - Cystitis, UTI's
    - Yeast infections
    - Frequent colds/flu




### Stress Related Conditions

- Asthma & Eczema
- Autoimmune disorders
- Cancer
- Cardiovascular conditions
  - Hypertension
  - Angina
- Type II Diabetes
- Headaches
- Irritable bowel syndrome
- Ulcerative Colitis/Ulcers
- Frequent infections
- PMS
- Infertility
- Depression
- Poor concentration
- Menstrual irregularities
- Functional Hypothyroidism
- Fatigue
- Insomnia

### Adrenal Fatigue

- Signs:
  - Blood pressure will drop on standing
  - Pupils will remain dilated in bright light
- Symptoms:
  - Fatigue
  - Lack of motivation
  - Post exertion fatigue
  - Poor memory and concentration
  - Mood disturbances
  - Waking up tired
  - Paradoxical energy
  - Craving stimulants
  - Craving salt, carbohydrates
  - Abdominal fat deposition




### So....What can we do about it?

- *Routine, routine, routine*
  - Same time to bed nightly
    - Sleep in a dark room
  - Same time awake daily
    - Exposure to light in the morning
  - Same meal times
    - No skipped meals
  - Helps establish circadian rhythm
    - Allows body to assign functions based on time of day
- Get enough sleep!
  - Between 8-9 hours
  - Take advantage of your 'window'
    - Peak melatonin production in the hours before midnight
- Exercise
  - Endorphin release
  - Preferably in fresh air
  - Yin yoga, tai chi or Qi gong for adrenal depletion

### Supporting the Stress Response

- Balance blood sugar
  - Low glycemic index
- Adopt a 'Whole Foods Diet'
  - No flour
  - No sugar
  - 1/2 plate is vegetables
  - Clean, lean protein
  - Avoid stimulants
  - Avoid known food sensitivities
  - Drink plenty of water




### Supporting the Stress Response

- B vitamins
  - B5
  - B6 – especially in women taking the birth control pill.
- Minerals
  - Sea vegetables
  - Sea Salt
- Anti-Oxidants
  - Vitamin C, E, Selenium
- Zinc and Copper
  - Pumpkin seeds
- Calming Herbs
  - Chamomile
  - Passion flower
  - Valerian
  - Skullcap
  - Wild Lettuce
    - Lowers excitability
    - Promotes relaxation
    - Decreases anxiety
    - Induces a state of rest

### Supporting the Stress Response

- Adaptogenic Herbs
  - Holy Basil
  - Rhodiola
  - Siberian Ginseng
  - Licorice
  - Ashwaghandha
    - Improves ability to withstand stress
    - Supports blood sugar balance, immunity and nervous system
    - Increases stamina, memory and concentration



### Supporting the Stress Response

- Ultimately, We are hardwired for stress
  - We learn how to adapt through struggle
    - The stresses in our lives are unlikely to change
  - It's our relationship to that struggle that shifts us to the kind of intrinsic stress that overwhelms our ability to thrive
    - We have more control over this than we realize

### Supporting the Stress Response

- Taking a break from technology
  - Green time as an antidote to overstimulation
- Taking stock of relationships
  - Spend time with people you love and avoid those with confusing energy
- Mindfulness: interrupting the stress response
  - Know your emotional triggers
  - Know your physical cues
    - Tara Brach's 'sacred pause'
- Loose yourself: Play and Laugh!!
  - Norman Cousins's: Anatomy of an Illness

### Putting It All Together

- Health recovery takes time
- Start with simple steps
  - Build on these
- Health gets easier
  - You'll have the energy for it!
- What seems hard now *WILL* pay off
- The result?
  - More energy
  - Better sleep
  - Improved mood and concentration
  - Ideal body weight
  - Optimal digestion
  - Increased immune function
  - Hormone balance
- **VITALITY!!**

### !!Thank You!!



“A grand adventure is about to begin”  
~Winnie the Pooh