

The Nutritional Management  
of Attention Deficit Disorder,  
Attention Deficit/  
Hyperactivity Disorder,  
and Hyperactivity

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# Hyperactivity Today

- ◇ 4-12% of schoolchildren diagnosed with ADHD
- ◇ more conservative diagnostic criteria for ADHD projected to lower this to 3%
- ◇ 20% of all children have some type of behavioral problem

# ADHD Starts When?

- ◇ Higher incidence of hyperactivity in infants who:
  - don't like to be held
  - have poor or irregular sleep
  - have colic
  - have feeding problems

# Rationale for Effective Treatment

- ◇ 25-60% of students with ADHD will drop out of school before high school graduation
- ◇ 25-60% will have contact with legal authorities
- ◇ Excessive alcohol use rates will be higher

# Rationale for Effective Treatment

- ◇ Self esteem is often lower
- ◇ Interpersonal relationships will likely be strained
- ◇ Aggressiveness behavior appears to be a strong predictor of long-term poor social outcome

# Proposed Etiology of ADHD

- ◇ Psychological factors
- ◇ Behavioral factors
- ◇ Genetic factors
  - ◇ 1. 1/3 of fathers (with ADHD as a youth) produced a child with ADHD
  - ◇ 2. A majority of identical twins both have ADHD
- ◇ Gender predisposition

# Proposed Etiology of ADHD

- ◇ Cerebral neurotransmitter abnormalities:  
dopamine and serotonin
- ◇ Environmental pollutants such as lead
- ◇ Exposure to fluorescent lights
- ◇ Perinatal factors (maternal phenylketonuria)
- ◇ Smoking during pregnancy
- ◇ Parental behavior

# Proposed Etiology of ADHD

- ◇ Hypersensitivity
- ◇ Allergy

# Hypersensitivity or Allergy?

## ◇ Hypersensitivity

- a non-allergenic reaction to the chemicals contained in food, possibly due to an inherited biochemical predisposition
- can occur as a threshold response, or all-or-nothing response

# Hypersensitivity or Allergy?

## ◇ Allergy

- an immediate IgE mediated response where antibodies are produced, or
- a delayed, lymphocyte mediated response involving gastrointestinal symptoms

# BOTH!!

- ◇ Either hypersensitivity, or allergy, or a combination of both can occur

# Behavioral Toxicology

- ◇ Challenging to isolate the effect of a single substance
- ◇ Difficult to isolate a nutritional effect from the placebo effect
- ◇ Difficult to completely remove psychotropic agents from the diet  
Examples: soft drinks, tea, coffee

# Diet Affect

- ◇ No substantial difference between the diets of hyperactive children and non-hyperactive children (ex. - sugar)
- ◇ Consistent sub-group of children who improve, and then exhibit symptoms when challenged with the offending foods

# No Single Cause and No Single Cure

- ◇ Psychotropic prescription medications only effective while being taken – they provide no cure
- ◇ Dietary intervention demonstrates improvement in certain individuals
- ◇ Dietary intervention appears to have a longer lasting effect

# Nutritional Recommendations

- ◇ 1-2 month trial of the Feingold diet
  - eliminate artificial colors (especially tartrazine)
  - eliminate artificial flavors
  - eliminate salicylates
    - ◇ ex.-almonds, apples, apricots



# Nutritional Recommendations

- monitor vitamin C consumption
  - ◊ since high levels can reduce renal clearance of the salicylates
- monitor adequate protein intake
- monitor total nutrient intake

# Nutritional Recommendations

- ◇ A high protein/ low carbohydrate diet
- ◇ Supplement with:
  - ◇ Niacin
  - ◇ Thiamine
  - ◇ B6
  - ◇ Choline
  - ◇ Magnesium
  - ◇ Calcium

# Questionable Benefit?

- ◇ Sugar reduction
- ◇ Copper
- ◇ Iron
- ◇ Magnesium
- ◇ Manganese
- ◇ Zinc

# Additional Therapies

- ◇ Increasing physical activity
- ◇ Tutoring
- ◇ Family counseling
  - Increasing parent tolerance

# What Can the Physician Do?

- ◇ Ensure the child has been accurately diagnosed
  - to rule out other diseases
  - to rule out the absence of any disease
- ◇ Perform a food allergy and sensitivity assessment
- ◇ Discuss dietary modification
- ◇ Recommend nutritional supplementation
- ◇ Recommend increased physical activity
- ◇ Refer for family counseling, remedial teaching, and psychiatric treatment

**BE WELL and BE HAPPY!!**



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