



Nutrition and Weight Loss

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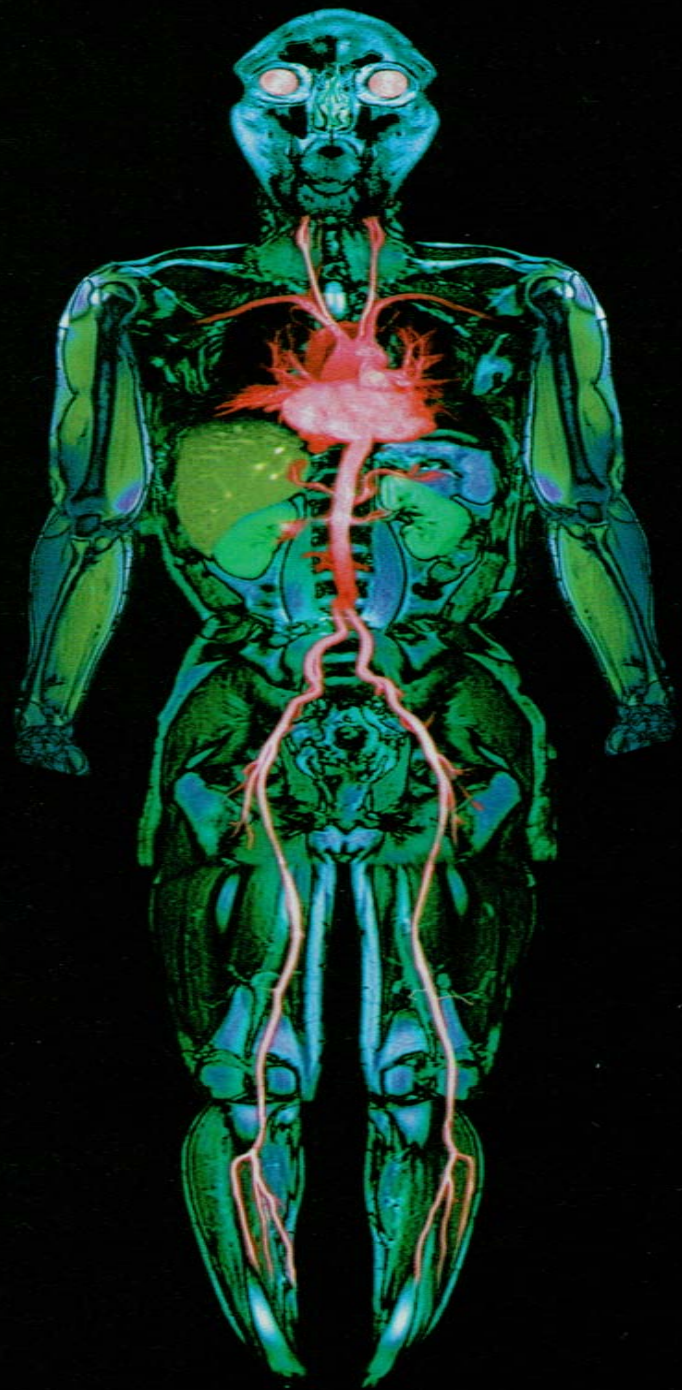
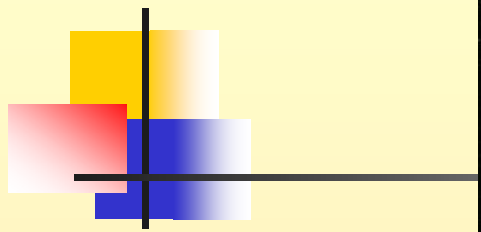
Nutrition in Context

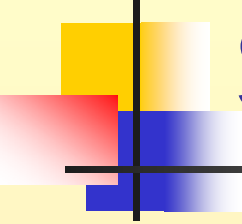
- What is the role of nutrition in human function and illness?

Nutrition and The Human Being



- Strong emphasis
 - Nutrition is a key factor in physical well-being and function
 - Essential for metabolic processes and cellular and organ structure and function
 - Nutrition affects every organ system
- Equally important
 - Every organ system affects nutrition and weight
 - Brain, heart, kidneys, liver, adrenals, etc.





Physiology and Function: Summary

- Central nervous system (CNS) directs the body, so that
- Body will protect and preserve the CNS
- Body and brain then collaborate so that the person can think and act



The Physiological Reality

- For the body, nutrition is always a means to an end – not an end in itself
 - Therefore, should always be considered and managed in context
- Often heated debates on artificial nutrition and hydration may not appreciate or acknowledge this biological reality



“Context” in Geriatrics

- Multiple, simultaneous conditions
- Choices among several imperfect options
- Potentially inconsistent goals
- Physical, functional, and psychosocial dimensions
- Biological “realities”
- Multiple philosophical perspectives



Universal Challenges

- Obtain accurate, pertinent information
- Interpret nutrition-related information in proper context
- Take meaningful action in the person's best interests
- Obtain meaningful information about the relevance and effectiveness of interventions



General Concepts

- Management of weight loss governed by various ideas
 - Some are more relevant and sensible than others
 - Some are questionable but benign
 - Some are very problematic



Weight Change and Anorexia

- Weight change and anorexia are symptoms, not diseases
- Weight change can have various causes
- Possibilities
 - Anorexia with little or no weight loss
 - Weight loss despite good appetite
- Assess, don't obsess, about weight changes
 - A practitioner should be involved early if anorexia or rapid weight change



Physician Roles

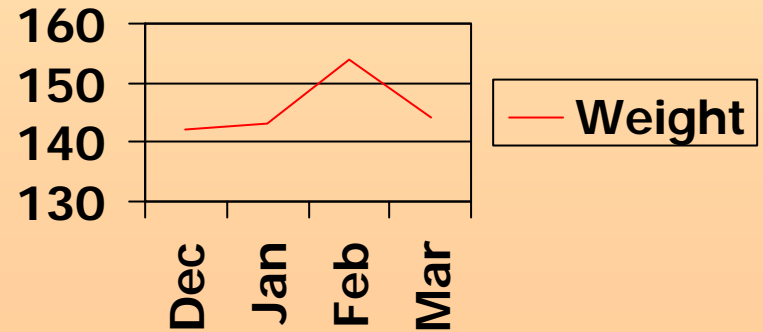
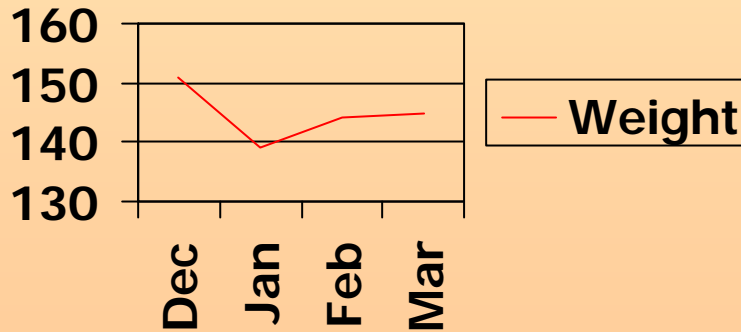
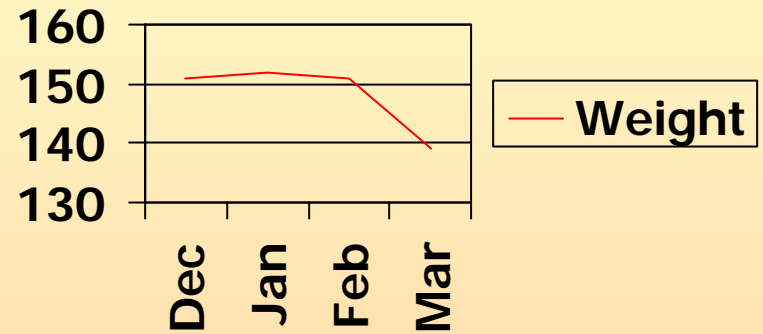
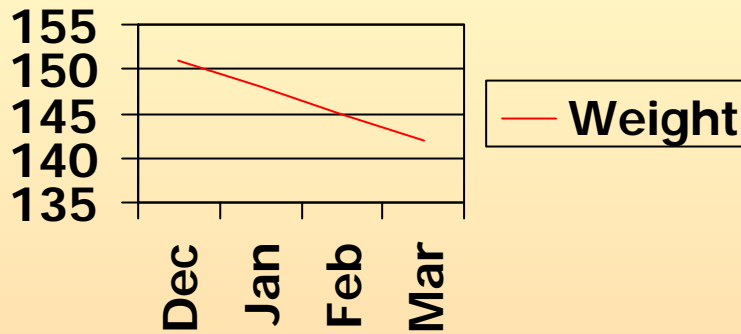
- View nutrition in proper context
- Help define nutritional issues appropriately
 - Including anorexia and weight change
- Help distinguish categories and causes of impaired nutrition
- Advise staff and residents appropriately
- Promote appropriate cause-specific interventions
- Help monitor and manage situation



History: Time Frame

- Common in LTC to emphasize time frame of weight change
 - 5% in one month
 - 10% over 6 months
- Is this information in itself useful for determining causes and appropriate management of weight loss?
- Things happen in a sequence!

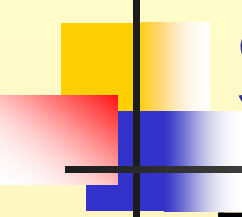
Weight Loss Patterns: Vital to Know





History: Details Matter

- What is the story (chronology)?
- What was the rate, and over what period?
- What was the pattern of weight loss?
 - Gradual, progressive
 - Abrupt, then continuing
 - Gradual or abrupt, then stabilized
- Was there anything that the individual ate most or all of, most of the time?
- Questions essential to differential diagnosis
 - Using weight loss percentages only => guesswork



Symptoms and Causes

Causes → Symptoms	One	Multiple
One	+ / +	+ / + + + +
Multiple	+ + + + / +	+ + + + / + + + +



Importance of the History

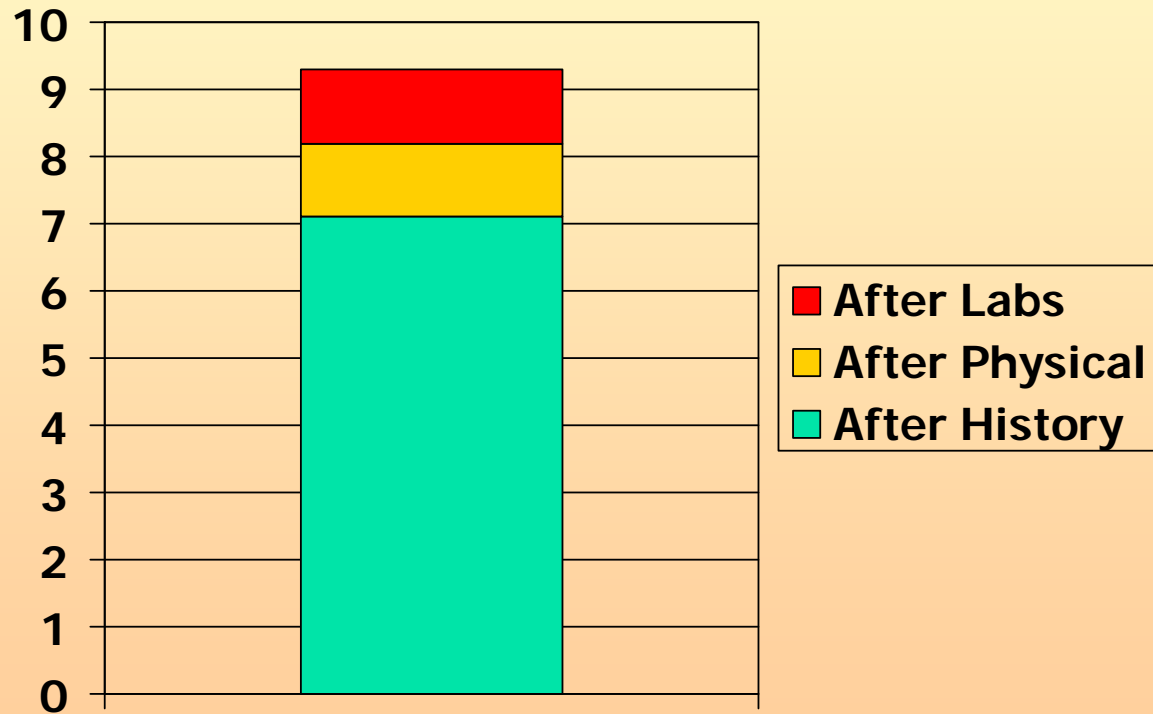
- Goal of study (published 1992)
 - Attempt to quantify relative contributions of history, physical examination, and laboratory investigation in making medical diagnoses
- Prospective study of 80 medical patients with new or previously undiagnosed conditions



Importance of the History

- Internists asked to list differential diagnoses and estimate confidence in each diagnostic possibility
- After history, after physical examination, and after laboratory investigation

History is Most Important (1992)

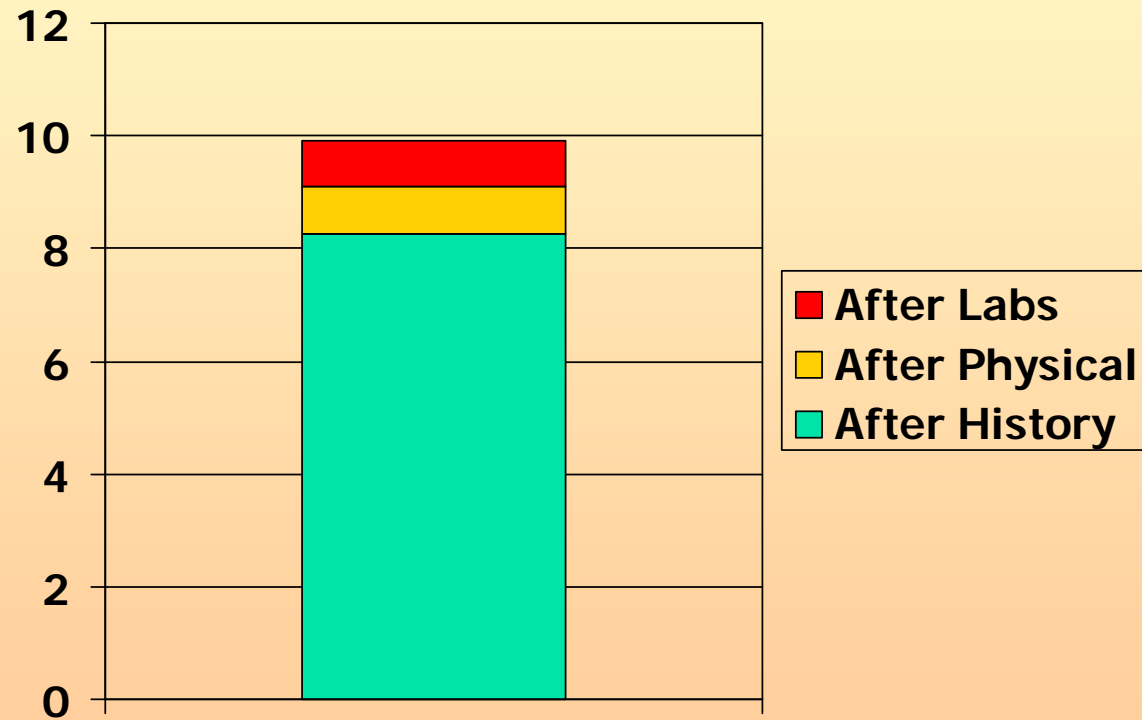




Importance of the History

- Goal of study (published 1975)
 - To evaluate relative importance of medical history, physical examination, and laboratory investigations in diagnosis and management of medical outpatients
- Results
 - Diagnosis that agreed with the one finally accepted was made after reading the referral letter and taking the history in 66 out of 80 new patients

History is Most Important (1975)





History is Most Important (1947)

- In most cases, diagnosis can be made with the history alone
 - Platt R. Two essays on the practice of medicine. Manchester University Medical School Gazette. 1947; 27:139-145.



Importance of the History

- Results of physical exam and laboratory investigation led to fewer diagnoses
 - Helped exclude certain diagnostic possibilities
 - Helped increase physicians' confidence in their diagnoses
 - Peterson MC, Holbrook JH, Hales D, Smith NL, Staker LV: Contributions of the history, physical examination, and laboratory investigation in making medical diagnoses. West J Med 1992 Feb; 156:163-165



Critical Importance of the Story and the Rationale

- “Why” is as Important as “What”
- The story reflects key biological reality
 - Things happen in sequence
 - Knowing the sequence reveals much about what is needed for safe and effective care



Things Happen in a Sequence

- Symptoms (including those related to medications often part of a cascade of problems
 - Medication → lethargy → decreased oral intake → fluid/electrolyte imbalance → further lethargy → weight loss → skin breakdown
 - Pneumonia → confusion → medication → lethargy → skin breakdown

Nutrition and Care Delivery Process

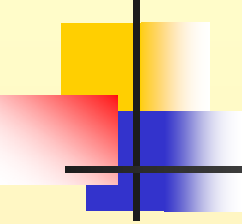


- Recognition
 - Observation, data gathering
- Assessment
 - Problem definition, cause identification, analysis
- Treatment
 - Identification of goals
 - Selection of appropriate interventions
 - Symptomatic and cause-specific
- Monitoring
 - Identify course of condition, success of interventions, risks/benefits
 - Adjust interventions accordingly



The Information “Mixing Bowl”





Information “Mixing Bowl”

- Ingredients from diverse sources
- Combined in the right order and proportions
- Objective must be kept in mind in interpreting the recipe
- Not all ingredients equally relevant
- Wrong ingredients mess up the result



Recognition

- Is any test related to nutritional status routinely helpful or necessary?
 - No
- Is there any marker of nutrition that routinely indicates the need for an intervention?
 - No
- Is any marker of nutrition reliable (sensitive and specific) enough to be useful routinely in long-term care?
 - No



Diagnosis

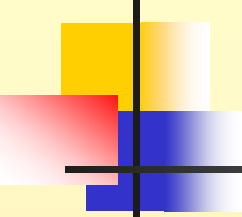
- Albumin, cholesterol, and CBC with differential
 - May be useful prognostic indicators
 - Provide baseline for comparison if nutritional status changes later
 - No need to repeat if already done
 - No need to “chase” test results



Pre-albumin

- May help with critically ill patients receiving enteral or parenteral nutritional interventions
- No compelling evidence that it's significantly helpful in managing most long-term care residents

Albumin And Clinical Nutritional Status



- Serum Albumin Concentration and Clinical Assessments of Nutritional Status in Hospitalized Older People: Different Sides of Different Coins. J Am Geriatr Soc 50:631-637, 2002
 - Albumin and clinical assessments of nutritional status reflect fundamentally different clinical processes
 - Nutritionally adequate diet and albumin levels often don't correlate



Establishing Patient Goals

- Nutrition as a means to an end
 - Remains physiologically sound principle
- Must reconcile all goals and approaches
 - Losing weight but on restricted diet
 - Underweight and not eating well, but on cholesterol lowering drugs
 - Undernourished but may have some risk of aspiration

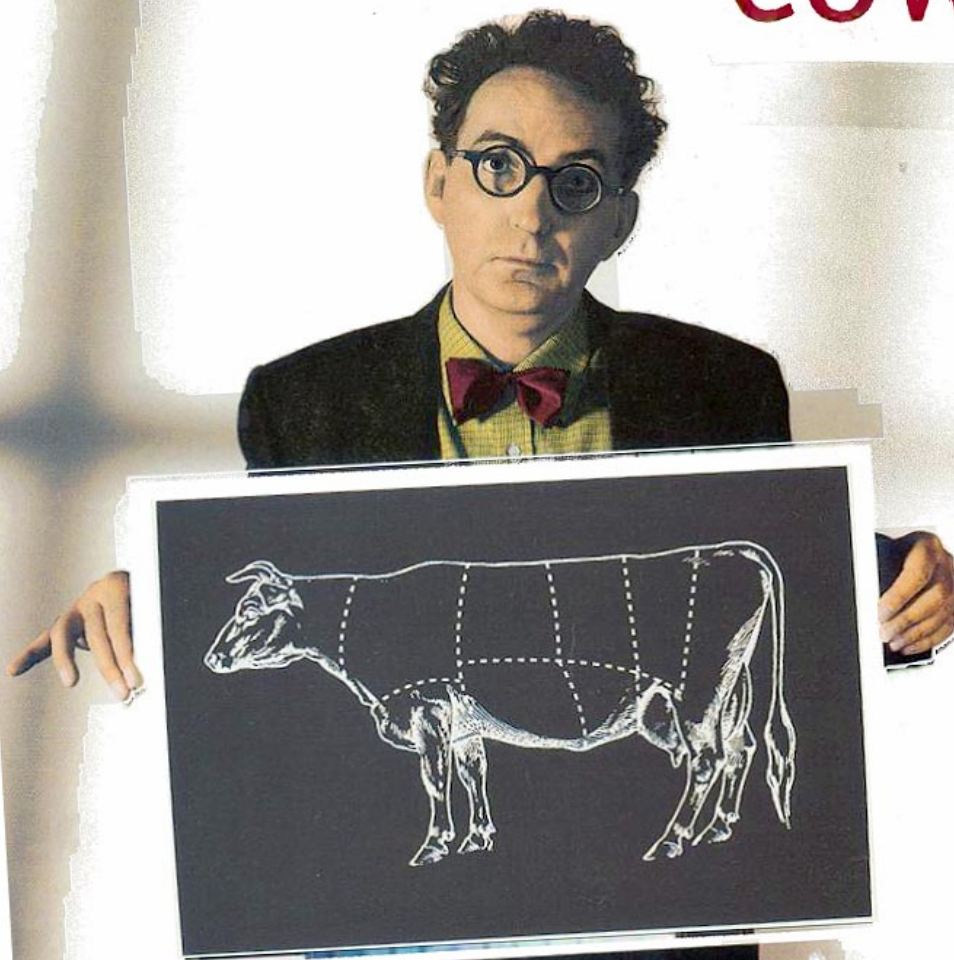


Establishing Nutritional Goals

- Apply the whole care process
- Appropriate care is more than the sum of separately derived conclusions

This is not a

COW.





Problem Definition: Key Considerations

- Is it anorexia?
- Anorexia is a problem, not a disease
 - Often caused by medications and medical conditions
- Key questions
 - Are they eating everything given?
 - Are they selectively eating a lot of certain things?



Recognition

- How do we identify how much the individual is consuming?
- No foolproof method
 - Document percentage of food on plate that patient consumes
 - Estimate percentage by serving portion or by food group to help dietician tailor meals to match the patient's preferences
- Bottom line: approximate, don't obfuscate



Cause Identification

- How much of a work-up?
 - Depends on the “context”
 - If workup not indicated, simple differential diagnosis still often possible
 - Differential diagnosis
 - Orderly prioritization and combination of “mixing bowl” ingredients
 - Based on knowledge that certain findings or combinations => certain diagnoses

Interventions: Nutrition in Context



- How do patient goals relate to nutritional interventions?
- Don't always know goals at first
- Consider interventions tentative until more complete evaluation done and goals identified
- Reassess interventions in context of goals, coexisting conditions, condition changes, etc
- All disciplines should consider "big picture"



Food Considerations

- Stop more “extreme” therapeutic diets
 - Still used often
 - Rarely beneficial
- Food preferences and meal substitutes
 - Some individuals will eat a lot of a few things
 - Give them more of what they will eat
- Snacks and supplements
 - If that’s all they’ll take, and they take it all, then give them more



Food Considerations

- Changing diet consistency
 - Selectively useful; often unnecessary
 - “Abnormal” only sometimes means “needs restrictions”
- “Context” of abnormality is all important
- Risk factor for altered hydration and nutrition
- Fear shouldn't overwhelm good practice
- No one discipline should dictate



Food Considerations

- Palatability

- Age and disease often impair taste
- NH food preparation should be more than bland to tasteless
- Why prepare food for the lowest common denominator (those who don't like seasoned food)?



Other Considerations

- Dining environment
- Oral, dental, or chewing problems that may interfere with eating
- Functional impairments that may affect eating
 - Meal-time assistance
 - Restorative dining program
- Medical conditions
- Medications



Appetite “Stimulation”

- Sometimes helpful, but generally not a first line treatment
- Should not substitute for evaluation of other causes
- If goal is palliative, then why do it?
- If goal is improvement, why skip other issues / causes / approaches?
- Antidepressants are not “appetite stimulants”!
 - Example: Remeron has < 20% prevalence of weight gain and increased appetite (manufacturer’s own data)



Desired Outcomes

- What is the primary endpoint of nutritional interventions?
- Weight stabilization
 - Continued weight loss: poor prognosis
 - Weight increase may take weeks or months, and may not be achieved
 - New, lower baseline may occur
 - Especially when recently severely ill, coming from hospital, marked weight loss prior to admission
- No evidence to support assertion that if weight does not increase, it is necessarily due to poor practice



Ongoing Monitoring

- Progress notes should briefly describe
 - Treatment plan and individual's compliance with it
 - Effects, complications, and side effects of interventions
 - Trends in weight lost or gained
 - Strategy for adjusting intervention as necessary
 - Individual's prognosis and likely clinical course



The Options

- Weigh people properly and consistently; verify accuracy
 - Challenging, inexpensive, low risk
- Define the weight or nutrition-related problem appropriately
 - Challenging, inexpensive, low risk



The Options

- Characterize the nutritional issue correctly before rushing to act
 - Challenging, inexpensive, low risk
- Identify the presence of anorexia
 - Simple, inexpensive, low risk



The Options

- Recognize predisposing factors
 - Simple, inexpensive, low risk
- Identify causes (via differential diagnosis)
 - Challenging, relatively inexpensive, relatively low risk
- Establish realistic goals
 - Challenging, simple, low risk



The Options

- Reconcile simultaneous or conflicting goals
 - Challenging, simple, low risk
- Use lab testing judiciously
 - Simple, inexpensive, low risk
- Limit therapeutic diets
 - Simple, inexpensive, low risk



The Options

- Limit modified diets to absolutely essential
 - Simple, inexpensive, relatively low risk
- Assess food preferences and eating patterns
 - Simple, inexpensive, low risk



The Options

- Make the food palatable
 - Simple, relatively inexpensive, low risk
- Use the dietician appropriately
 - Simple, inexpensive, low risk
- Have the physician involved appropriately
 - Challenging, somewhat expensive



The Options

- Identify and stop medications associated with anorexia or affecting weight or nutrition
 - Simple, inexpensive, relatively low risk
- Identify and treat medical causes of anorexia and weight loss
 - Challenging, somewhat expensive, variable risk



The Options

- Use antidepressants judiciously
 - Challenging, expensive, moderate risk
- Use orexigenics
 - Challenging, relatively expensive, moderate risk
- Use tube feeding only when unavoidable
 - Moderately complex, expensive, moderate to high risk