1 Recovery

2 Introduction
   - Seems like a simple issue but some inherent challenges
   - Basic question: What is meant by “recovery”?
     - what is the underlying mechanism
     - what is the rate of recovery
     - what are limits to recovery
     - who recovers
     - what recovers

3 Research Approaches
   - repeated assessment
   - assessment at intervals
   - global and specific comparisons

4 Three Types of Recovery
   - Spontaneous (without treatment)
   - With Treatment
   - Long term (often without treatment)

5 Spontaneous Recovery
   - Natural phenomenon
   - Researched in efficacy studies
     - no treatment control group
     - deferred treatment group

6 Parameters of Spontaneous Recovery
   - as a group, 55% noted to show improvement without treatment
   - Aphasic syndromes may evolve based on pattern of improvement
   - Greatest amount of improvement noted in auditory comprehension
   - Greatest amount occurs during the first 3 months
   - Globals the least amount

7 Mechanisms of Spontaneous Recovery
   - Two explanations
     - physiological based on notion of diaschisis
     - structural

8 Physiological
   - Diaschisis - a process in which neurons function abnormally because influences necessary to their normal functions have been removed by damage to neurons to which they are connected
   - Effect of diaschisis reduced
     - attributed to reduction of edema
     - attributed to spontaneous recanalization
• Attributed to collateral circulation

9 ☐ Structural
  • neural redundancy/multiple centers
  • neuronal loss without functional loss

10 ☐ Recovery with Treatment
  • Process Explanations: a new system for neural processing is developed
  • Intrasystemic and intersystemic reorganization
    • intersystemic reorganization (use intact behavior to facilitate new behavior)
    • intrasystemic reorganization- use different components of system to facilitate performance
      – lateral shift hypothesis
      – automatic-volitional

11 ☐ Long Term Recovery
  • Based primarily on verbal report
  • Not substantiated on formal tests
  • Ecologically valid
  • Requires research