

Best Practices In FALL Prevention

Debra J. Rose, Ph.D

California State University, Fullerton

Steven L. Wolf, Ph.D., PT, FAPTA

Emory University School of Medicine

Peggy Buchanan

Vista del Monte Retirement Community

What We Know!

- ✓ **Fall Prevention interventions that include an exercise component usually result in reduced fall incidence rates.**
- ✓ **Exercise has been shown to reverse risk factors that contribute to falls**
- ✓ **The type of exercise included is important to outcomes.**
- ✓ **Using exercise as an intervention strategy is probably cost effective.**

What We Do Not Know!

- **What type of exercise is best for different levels of risk?**
- **What is the optimal dosage as a function of fall risk?**
- **How cultural diversity may influence the type of exercise included?**
- **Whether exercise interventions really are cost effective.**

Reducing Fall Risk in Community-Dwelling Older Adults: A FallProof™ Method™



Debra J. Rose, Ph.D.

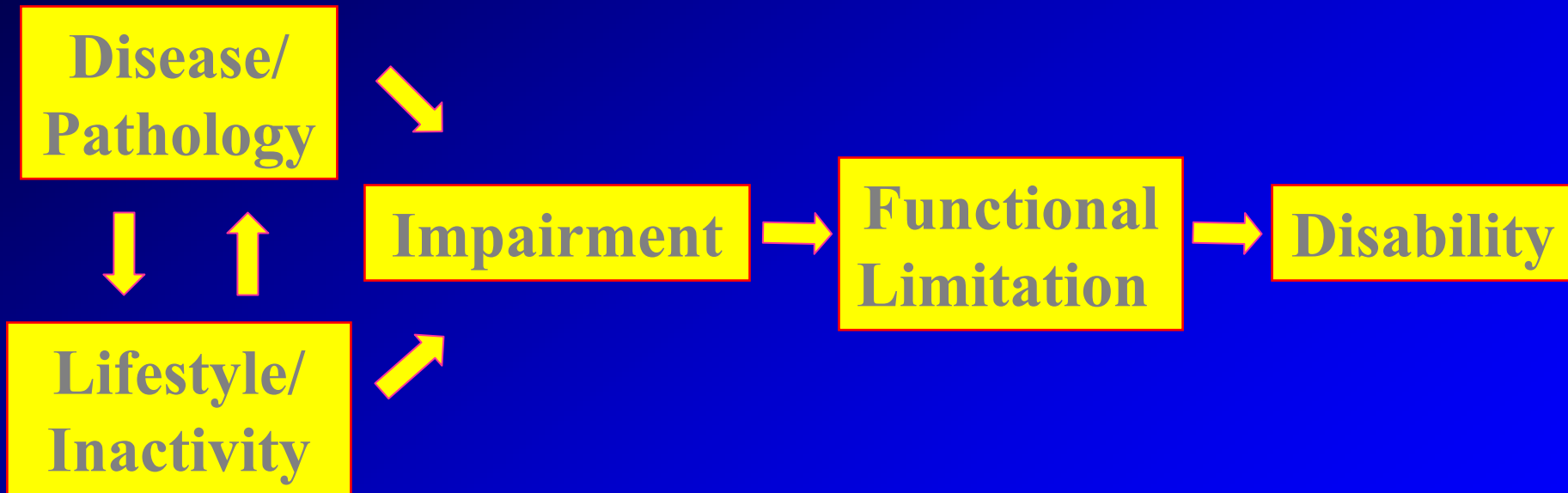
**Co-director, Center for Successful Aging
California State University, Fullerton**

Multidimensional Assessments

Balance and mobility programming should be based on the results of multidimensional assessments.



The Nagi Model



Introducing FallProof™: A Community-Based Fall Risk Reduction Program



Unique Features of Program

- **Assessment-driven programming**
- **Systematic and progressive programming**
 - **Manipulation of task demands**
 - **Manipulation of environment**





CORE COMPONENTS OF FALLPROOF™



Center of Gravity Control Training





Multisensory Training

- ✓ Goal is to improve ability to organize and integrate sensory systems for balance

Vision

Somatosensory

Vestibular



Postural Strategy Training

- ✓ Teach participants to appropriately scale movement response
- ✓ Develop efficient movement responses when balance is lost



Gait Pattern Variation and Enhancement Training

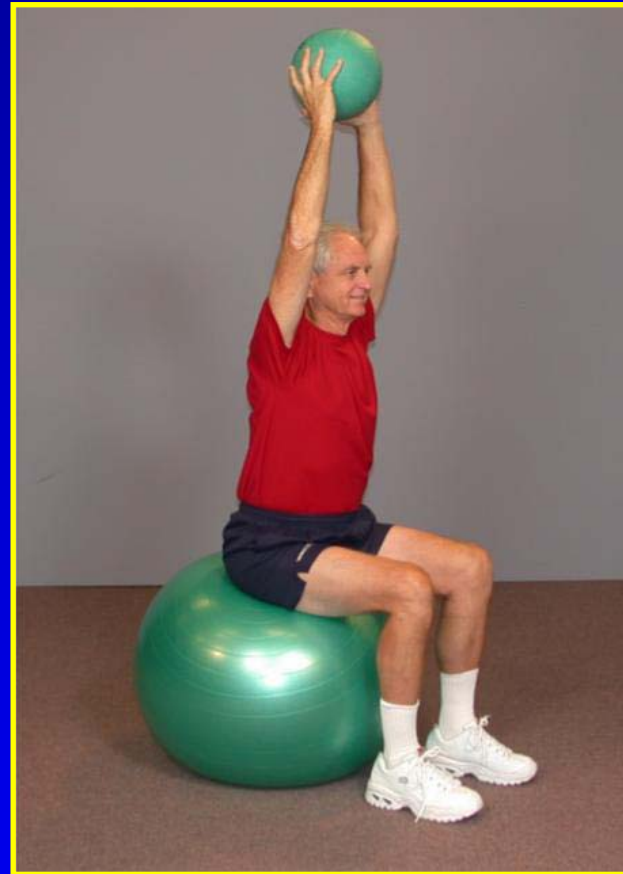
Goal is to make gait pattern more flexible and adaptable:

- ✓ **Starts, stops, turns**
- ✓ **Reduced Base of Support**
- ✓ **Altered support surfaces**



Strength and Flexibility

- ✓ **Emphasis on functional resistance training in balance environment**
 - ✓ **Promote core stability**
 - ✓ **Simulate “real-world” strength activities – pulling, pushing, reaching**



Is the FallProof™ Program Full Proof?



Research Outcomes

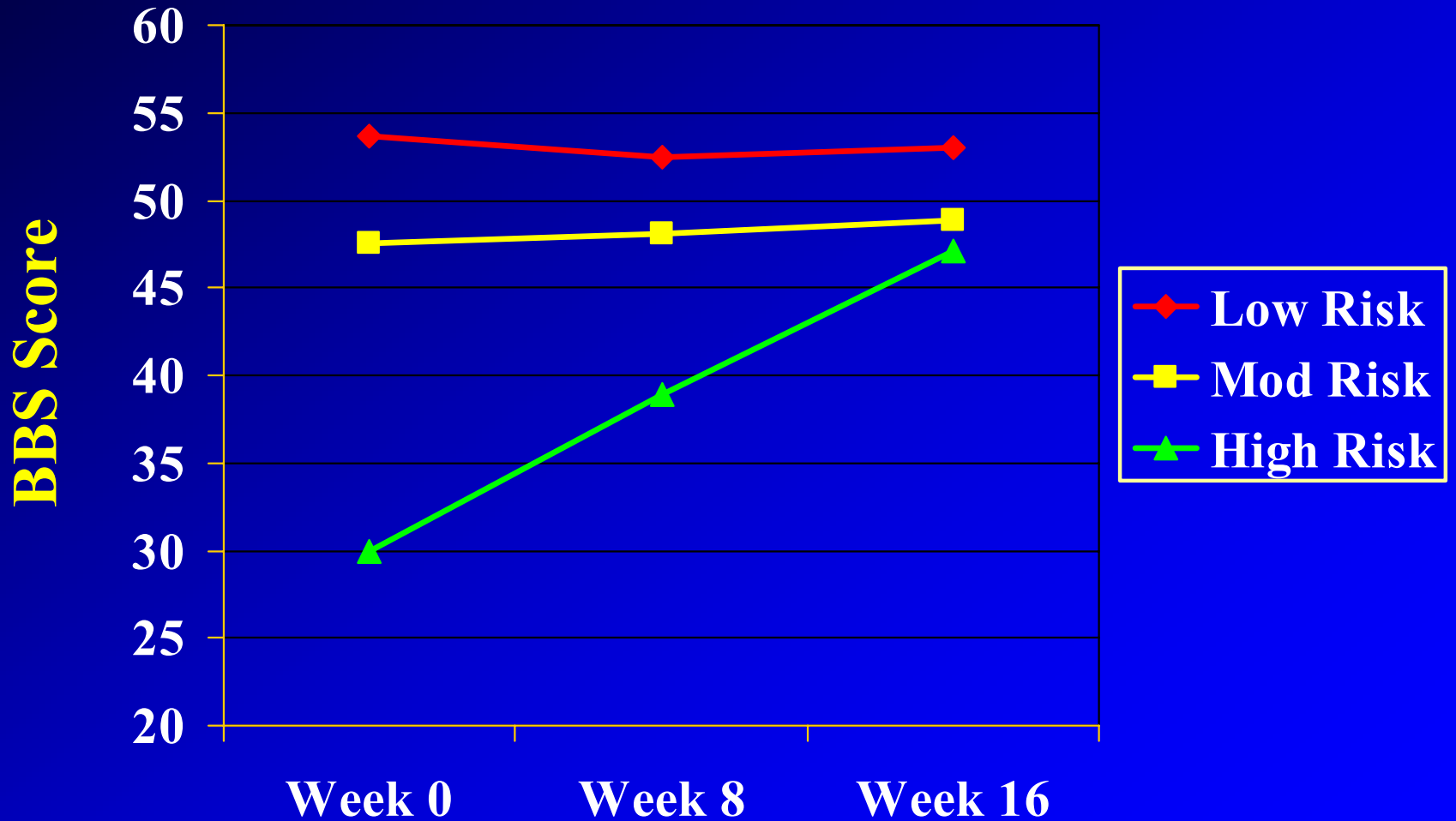
Significant Changes in:

- ✓ **Functional measures of balance and mobility**
- ✓ **Balance-related self-confidence**
- ✓ **Probability of falls (18 to 24%)**
- ✓ **Significant improvements in lower and upper body strength measures.**

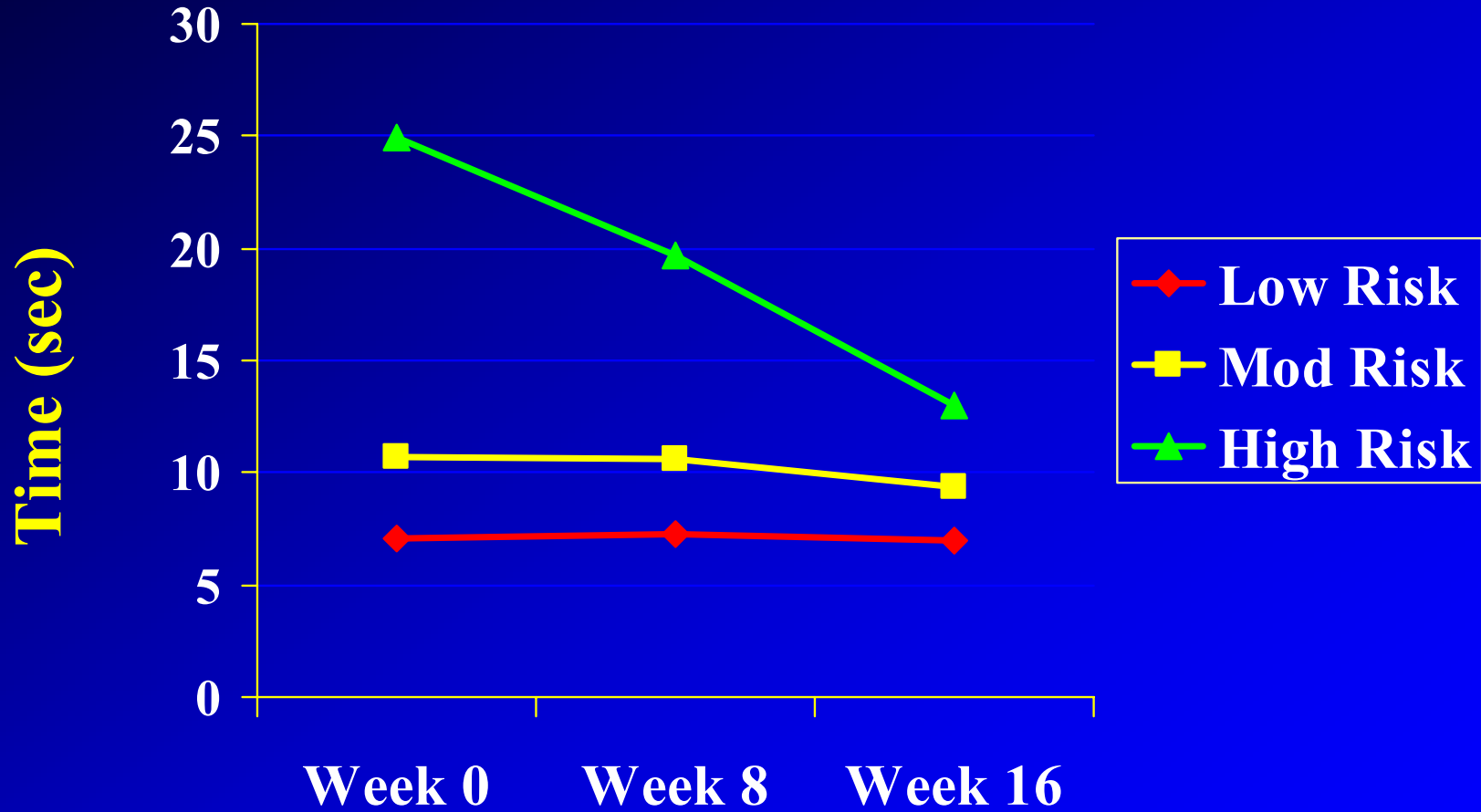
Effect of Program Length

- **Sub-sample of 72 participants completed a 16 week intervention.**
- **Outcomes compared for low, moderate, and high risk fall groups.**
- **Most significant improvements made by high-risk group.**

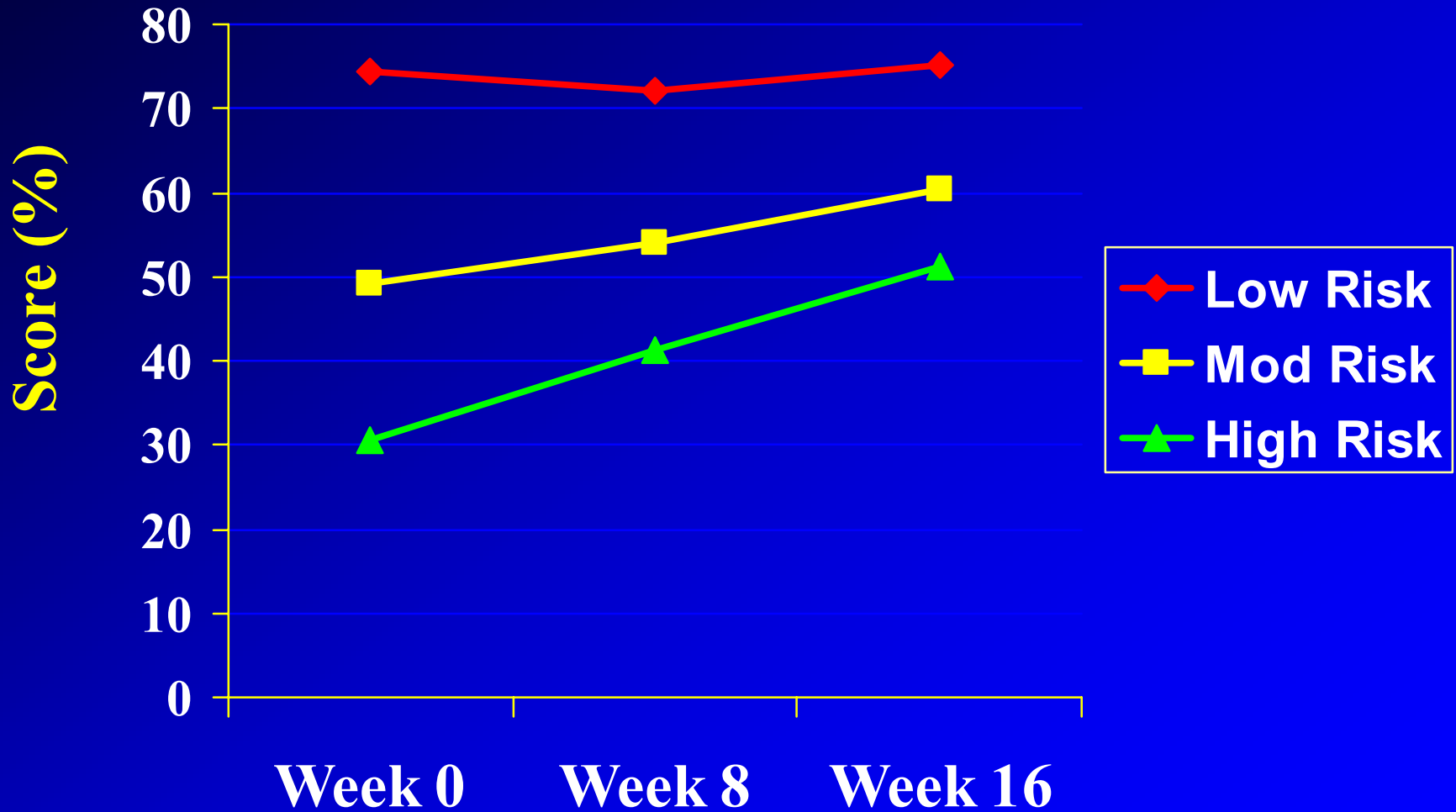
Berg Balance Scale Score



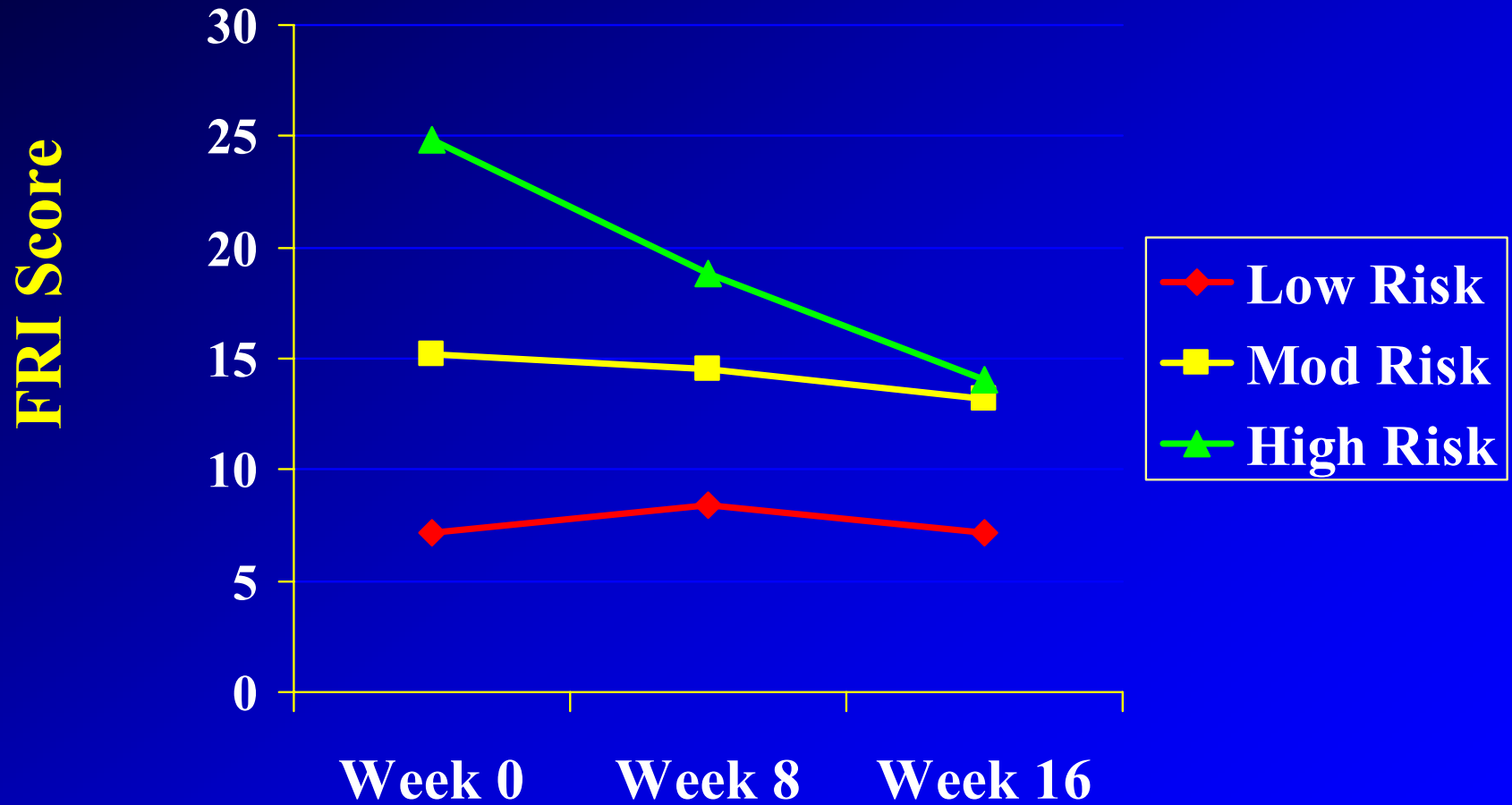
8 Foot Up and Go



Balance-Related Self-Confidence



Fall Risk Index Score



Summary

- **Fall risk declined significantly for moderate and high-risk groups, in particular.**
- **Programs of this type could serve as valuable post-discharge resources for the medical community.**

Instructor Certification Program

- ✓ **Initiated in 2001 at CSUF.**
- ✓ **Program combines web-based lectures and on-site practical laboratories and testing**
- ✓ **Self-paced program**
- ✓ **Program also includes a peer mentor training component**

