EPHE 575

Mental Imagery

To Do

Select Major Assignment Topic If Not Done!

Mental Imagery

The New York Times | http://nyti.ms/1dg6Sxa

OLYMPICS

Olympians Use Imagery as Mental Training

By CHRISTOPHER CLAREY FEB. 22, 2014

KRASNAYA POLYANA, Russia — The Canadian bobsledder Lyndon Rush had not yet arrived in Sochi. But he was already on the Olympic sliding track as he sat in a chair in the Munich airport several days before the Winter Olympics, his eyes wide open but his mind's eye far away as he traced a sinuous path through the air with his left hand.

"I just went from 7 to 14," Rush said, referring to the section of the track between Curve 7 and Curve 14.

Visualization has long been a part of elite sports. Al Oerter, a four-time Olympic discus champion, and the tennis star Billie Jean King were among those using it in the 1960s.

Steve Nash And The Imaginary Free Throw

By Dan Peterson

Every time Steve Nash goes to the foul line, he shoots five or six free throws. Sure, there's the two that really count, but the NBA's all-time free throw percentage leader always takes several imaginary shots before getting the ball. He says it helps him not only visualize the ball going through the net but also gets his brain and body prepped for the upcoming motor skill. After almost 3,400 regular season attempts, his 90.4% success rate seems to work, even if Dwight Howard isn't interested.

Actually, this "dry run" motor imagery is a well-used technique across several sports. Golfers always take the imaginary swing or putt before stepping up to the ball. Batters take their nervous hacks before the pitch. Football placekickers, the ultimate "hero or goat" athletes, focus on their warm-up kick before their

Use visualization, imagery like many of golf's greats

By **Dr. Dan Vosgerichian** - Oct 13, 2013 3

Using Mental Imagery to Improve the Return from Sport Injury

By Stephen Walker, PhD *April 23, 2007*

By J. Jordan Hamson, Ph.D., ATC

Have you ever wondered how the power of the mind could be used to help you recover from sport-injury?

Elite, collegiate, and even youth athletes use mental techniques, like imagery, to improve performance and to learn new sport skills. Due to the demonstrated effectiveness of mental imagery, athletes should be encouraged to transfer imagery use to situations outside of sport performance, such as return to sport following injury.

How can imagery be used to augment recovery from sport injury? When athletes become injured, mental imagery can be used to rehearse skills, to set rehabilitation goals, to promote healing within the body, and to relax when faced with the pain of rehabilitation. Time away from sport can be offset by substituting “mental practice” by visualizing sport skills, rehearsing strategic plays or game plans, and reviewing past successful performances. In injury rehabilitation, imagery aids the athlete to organize

HOCKEY GREAT WAYNE GRETZKY ON IMAGERY

"We taped a lot of famous pictures on the locker-room door: Bobby Orr, Potvin, Beliveau, all holding the Stanley Cup. We'd stand back and look at them and envision ourselves doing it. I really believe if you visualize yourself doing something, you can make that image come true . . . I must have rehearsed it 10,000 times. And when it came true, it was like an electric jolt went up my spine."

GOLF GREAT JACK NICKLAUS ON IMAGERY

"I never hit a shot, not even in practice, without having a very sharp, in-focus picture of it in my head. It's like a color movie. First, I "see" the ball where I want it to finish, nice and white and sitting up high on bright green grass. Then the scene quickly changes and I "see" the ball going there; its path, trajectory and shape, even its behavior on landing. Then there is sort of a fade-out, and the next scene shows me making the kind of swing that will turn the images into reality."

DIVING GREAT GREG LOUGANIS ON IMAGERY

"I did my dives in my head all the time. At night, before going to sleep, I always did my dives. Ten dives, starting with the first one I'd do in the Olympics, and I did everything as if I was actually there. I saw myself on the board with the same suit—everything was the same. If the dive was wrong, I went back and started over again. It takes a good hour to do perfect imagery of all my dives, but for me it was better than a workout. Sometimes I would take the weekend off and do imagery 5 times a day."

1. Enhances performance and learning

- The research done on the idea that an internal sensory experience has the power to help athletes perform better has been divided into three sections
  - **A. Mental practice-** able to repeatedly perform a skill in your mind without experiencing the physical fatigue
  - **B. Preparatory imagery-** used right before performance in order to "psych up", calm down, focus, etc.
  - **C. Multimodal mental training interventions-** effective when used concurrently with other mental training skills

2.Enhances thoughts and emotions

- Not only does it help you perform better, but it enhances those competition-related thoughts and emotions
- Research has shown that imagery:
  - » Enhances self-confidence
  - » Enhances motivation
  - » Enhances attentional control
  - » Helps decrease precompetitive anxiety
  - » Effective in changing athlete's perceptions of anxiety from harmful and negative to facilitative and challenging.

3. Successful athletes use it!

- More successful, elite athletes use imagery more extensively, more systematically, and have better imagery skill than less successful athletes

HOW DOES IMAGERY DIFFER FROM VISUALIZATION?

- **Visualization** is limited to 2 senses—what you see and what you hear.
- **Imagery** involves all 5 senses
  - sight
  - sound
  - taste
  - smell
  - touch/feel
- Imagery is enhanced when we use all the senses.

How to Use Mental Imagery

1. Internal versus External Focus
2. Engage all your senses
3. Timing
4. The Right Environment
5. Yoked to Regular Practice
6. Make it A Regular Part of Practice
7. Belief

Why does it work?

Learning the COGNITIVE elements of the task

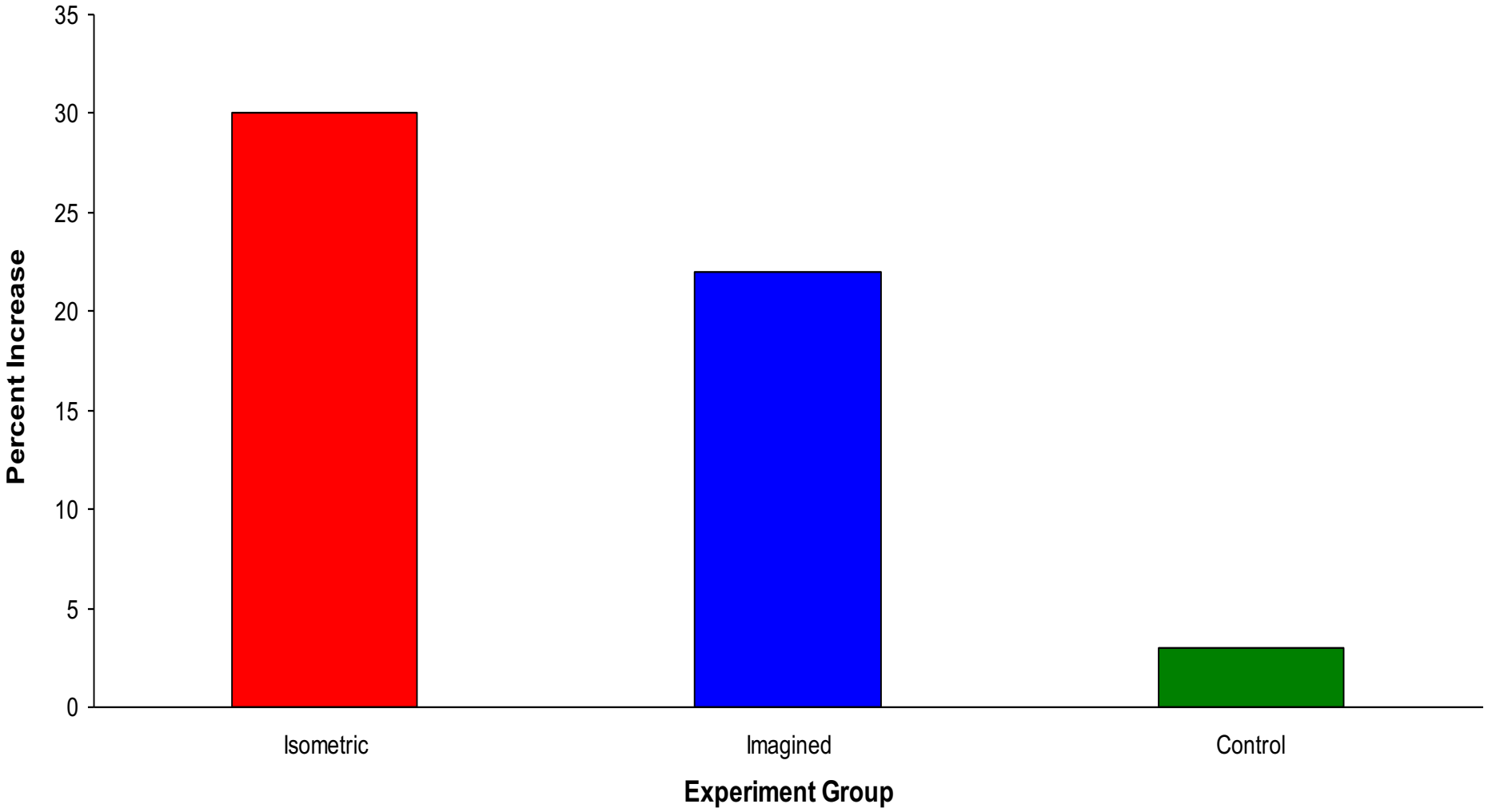
Heuer (1985)

Activation of Body Systems

(Pulmonary, Respiratory, Muscle)

Decety and Colleagues (1993)

Finger Strength
Yue & Cole (1992)

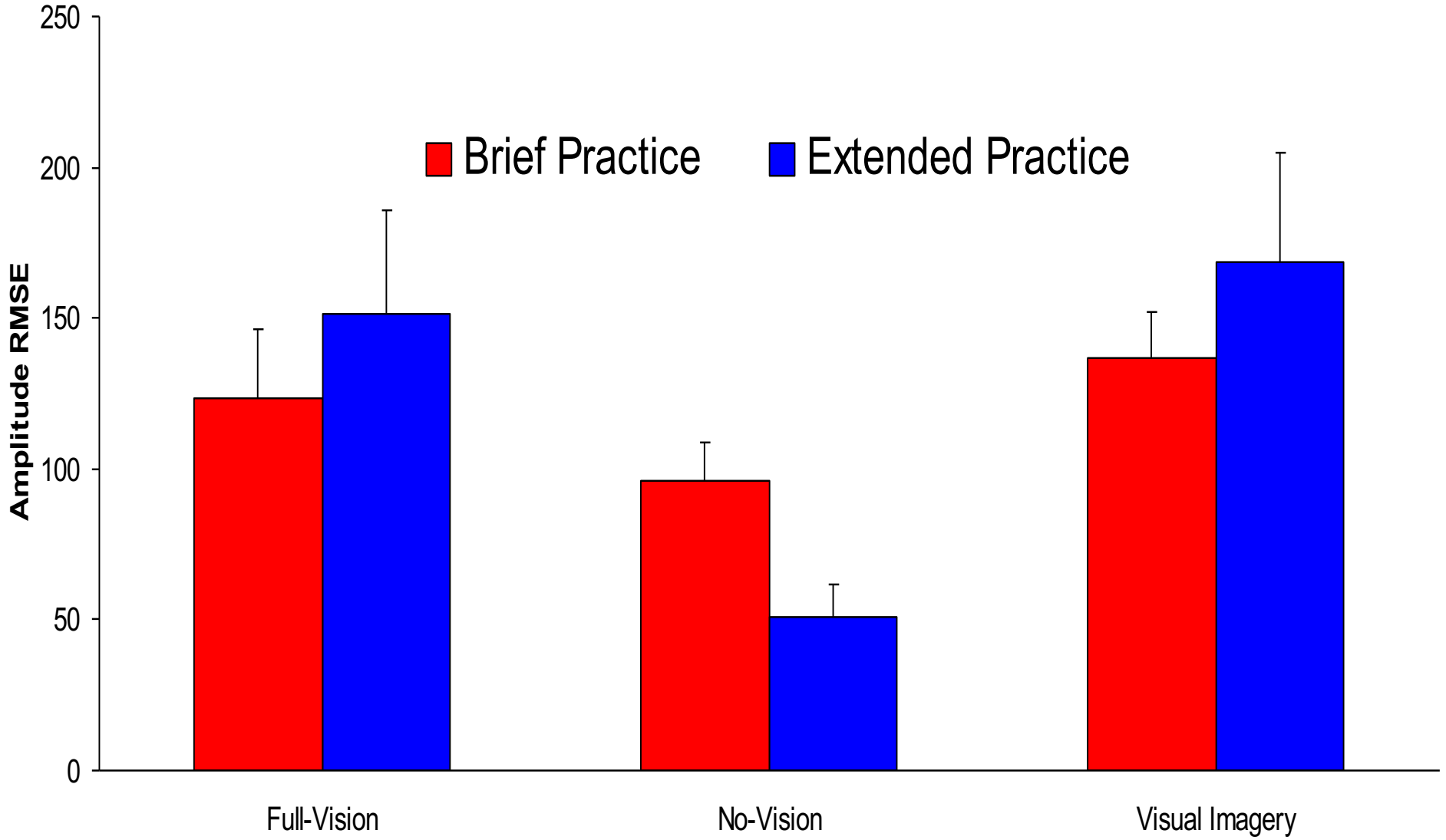


Feedback Processing

Eye scan of same regions

Laeng & Teodorescu (2001)

Specificity Walking Task with Imagery (Krigolson et al., 2006)



Timing of Actions

Decety, Jeannerod, & Prablanc (1989)

Mental Scanning

(Kosslyn et al., 1978)

Learn artificial map

Scan the imagined map

Scan time proportional to distance


(c) www.viewcalgary.com

Activation of Motor Area
Jeannerod (1994)

Finger Movement

Mental Imagery