COMPONENTS OF A PROPER WARM-UP FOR ACTIVE ADOLESCENTS: A LITERATURE REVIEW

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HONORS PROJECT

OVERVIEW

- Purpose
- Why adolescents
- Burdens of injuries
- Types of Stretching
- Components
- Limitations
- Further research

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PURPOSE

Review existing literature and come to a conclusion about the proper dynamic warm-up components and techniques that should be specific to adolescents involved in sport and physical activity

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WHY ADOLESCENTS

- **What is an adolescent**
- **Physiological changes**
- **Injury risk**
  - Growing
  - Not comfortable with new bodies

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BURDENS OF INJURY

- **Physical**
  - Obesity
  - Rates of injury
  - Re-injury
- **Psychological**
  - Self esteem
  - Exclusion from the team
- **Financial**
  - Cost

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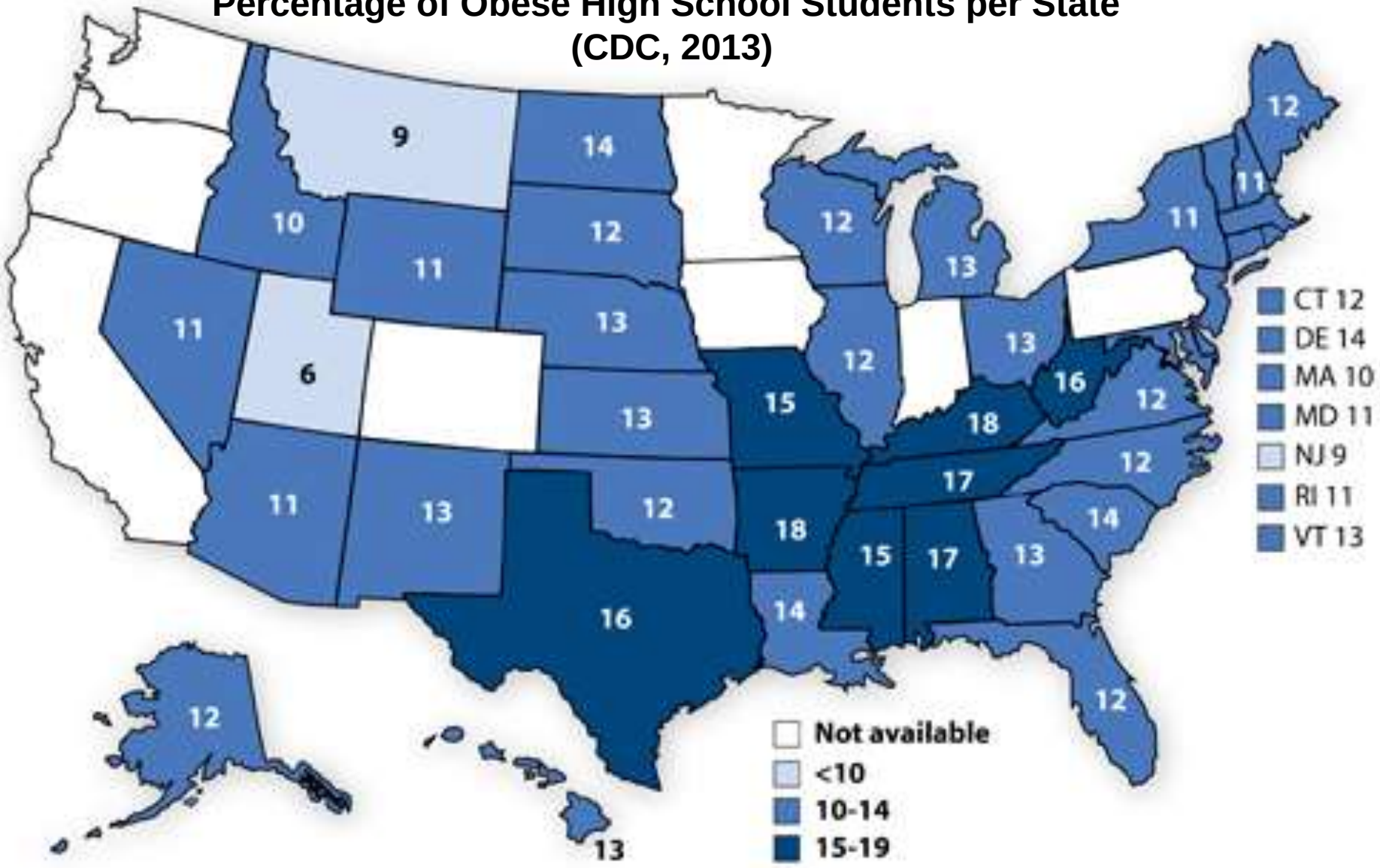
Photo from: http://health.usnews.com

Percentage of Obese High School Students per State (CDC, 2013)



PSYCHOLOGICAL

- **Self esteem**
  - Confidence

Photo from: http://myparentlab.com

FINANCIAL

- **Medical costs for sports injury emergency department visits exceed $935 million each year**
- **In 2008, it cost $10,000 to $15,000 for a lower limb injury**
- **Time lost at work or school**



COMMON COMPONENTS OF A WARM-UP

- **General body**
  - Physiologically prepare the body
- **Sport specific movements**
- **Stretching**
  - Static
  - PNF
  - Dynamic

Photo from: http://yourniskayuna.com

STATIC

- Stationary position
- Holding the stretch
- Examples:
  - Bending and touching toes
  - Side stretch

Photo from: http://rocksolidfitnessfl.com

Photo from: http://img.aws.livestrongcdn.com

PNF

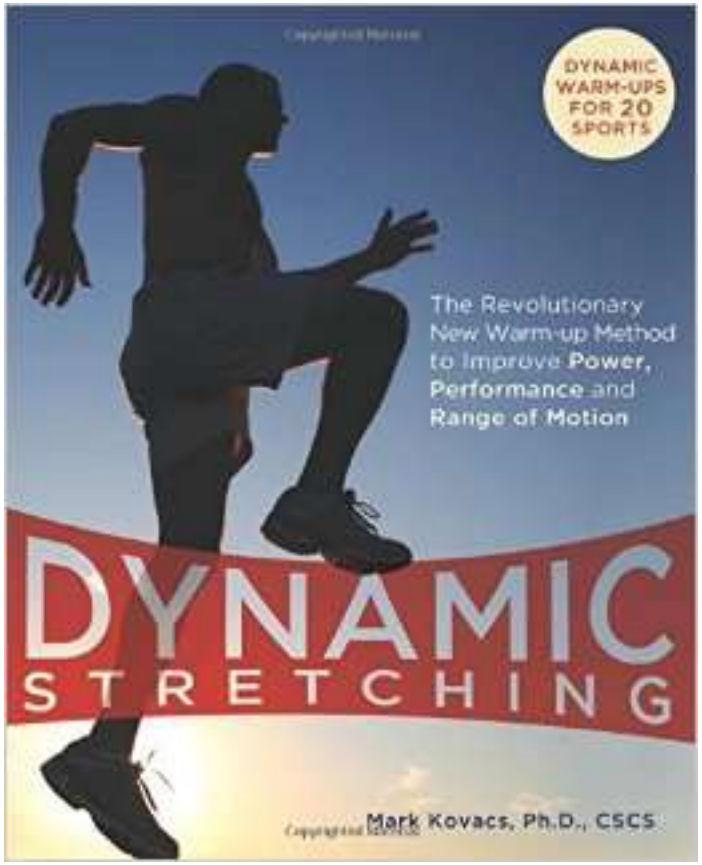
- **Proprioceptive Neuromuscular Facilitation**
- **Active and passive stretching**
- **More effective with two people**

Photo from: http://rangeofmotion.net.au

DYNAMIC

- **Sport specific**
- **Physiologically prepares the body**
- **Active moving and stretching**
- **Lengthen muscle then require muscle to create force in stretched position**
- **Examples:**
  - Walking lunge

Photo from: http://images.meredith.com



PROPER COMPONENTS FOR ADOLESCENTS

- **Dynamic**
- **Adult led**
  - Coach, parent, PE teacher, athletic trainer, etc.
- **Sport similar movements**
- **Strengthening, stretching, coordination, landing techniques, and balance**
- **Before games and practice**
  - Game time vs. practice time
- **Various aspects of life**
  - School
  - Sports

Photo from: http://www.right-fit.com

LIMITATIONS

- **Money**
  - Expensive
  - Available resources
- **Time**
  - Don’t know when an injury will occur
- **Recall studies**
  - Hard to remember accurately

Photo from: http://valleychristian.codesmprojects.com

FURTHER RESEARCH

- **Males and females**
- **Different levels**
- **Injury severity**
- **Experience of adult leader**

Photo from: http://photos2.demandstudios.com

KEY POINTS

- **Adult led**
- **Dynamic warm-up**
- **Structured**
- **Susceptible to injury during adolescence**
- **Keep kids active**

Photo from: http://www.todayonline.com

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QUESTIONS

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