

Exercise and Joint Health

Conner Lorenzo, MS, ATC, CSCS, SFMA, USAW

Director of Operations, Fitness Science

Orthopaedics & Physical Performance



Overview

- Understanding joint disease
- Identify risks
- Benefits of exercise
- Lifestyle modifications

- Fitness Science Program
- CHAMPP Facility



Quiz

What percentage of adults have been doctor-diagnosed with arthritis in the US?

25%

What percentage of adults meet US guidelines for activity?

40%



Background

- 58.5 million people in the US have arthritis
- Leading cause of work disability, with annual costs for medical care and lost earnings of \$303.5 billion
- Arthritis prevalence is highest among adults reporting minimal physical activity
- Inactivity among people with arthritis is associated with conditions such as cardiovascular disease, diabetes, obesity, and functional limitations
- Physical activity can be an important way to reduce pain, improve function, and manage symptoms for people with arthritis

Understanding Joint Disease

Arthritis – painful inflammation and/or stiffness of the joints

- Ankylosing spondylitis - type of arthritis that causes inflammation in the joints and ligaments of the spine
- Rheumatoid Arthritis - chronic (long-lasting) autoimmune disease that mostly affects joints. RA occurs when the immune system, which normally helps protect the body from infection and disease, attacks its own tissues. Causing pain, swelling, stiffness, and loss of function in joints
- Osteoarthritis (most common) - degenerative joint disease, in which the tissues in the joint break down over time. Can commonly lead to joint replacement surgery

Risk Factors We CANNOT Control

- Aging
- Family History
- Previous injury/surgery at joint



Risk Factors We CAN Control

- **Sedentary lifestyle**
 - a 2018 study out of Poland found a sedentary lifestyle lead to a 4 fold increase in joint pain
- **Overweight**



Prevention and Treatment

- Proper exercise and physical activity are shown to have a significant impact on the development of arthritis
- A structured exercise program is an integral part of the management of arthritis to improve function and decrease pain



Next Steps

Walking is GREAT

- A study out of Norwich Medical School in the UK found that simply adding walking to your daily routine has significant health benefits
- Including improvements in joint health



Exercise

Aerobic (CDC recommends 2.5 hours/week)

- Low impact activities that increase heart rate and use of oxygen

Resistance (CDC recommends 2 days/week)

- Designed to build strength, improve balance, and increase mobility
- Target muscles that support the joints
- Goal is to allow the body to tolerate the demands you put on it, by mastering movement patterns



Recap

- Diagnosed joint disease and increases in sedentary lifestyles are two issues facing our aging population
- Increasing activity combats both issues
- Low level aerobic exercise (walking) and proper resistance training have been shown to significantly improve symptoms related to joint disease

A Program of Orthopaedics and Physical Performance designed to help people optimize their performance through an integrative approach that includes four crucial pillars: Strength Training, Nutrition, Psychology and Data Analysis.



FITNESS SCIENCE

Fitness Science Offerings

Training – 1:1, small group, condition management classes

- Joint by joint approach through SFMA principles
- Identifying regional interdependence and stable/mobile joints

Nutrition – education, meal planning, body comp tracking

Psychology – injury/recovery management

All evidence based programs supported by research!

Center for Human Athleticism, Musculoskeletal Performance and Prevention (CHAMPP)



Questions?

Thank you!

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