



Arthritis and Exercise

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- Why is arthritis becoming a big deal?
- Risk factors for arthritis
- Normal changes with age
- Why exercise can help
- How to exercise with arthritis

Why Is Arthritis A Big Deal?

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- 5x more prevalent in women by age 65
- Our population as a whole is aging



Baby Boomers

FLOYD™

1940's



NOW



Risk Factors That CAN'T Be Changed:

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- Family History
- Age
- Sex



Risk Factors That CAN Be Changed

- Obesity
- For every pound of weight lost there is a 4 pound reduction in knee joint load during walking



Risk Factors That CAN Be Changed

- Muscle weakness
- Injuries
- Overuse (occupational/athletic)

- Older people tend to stop exercising when there is a problem
- Research reports as much as 50% of declines due to aging are related to inactivity



Normal Musculoskeletal Changes With Age

- Bone loss/decreased bone strength
- Decreased muscular strength
- Decreased flexibility



Normal Nervous System Changes With Age

- Decreased sensation
- Decreased balance/coordination
- Impaired vision



Exercise Can Help!

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- **EXERCISE** and **ACTIVITY** will help to slow this decline



- Goals:
 - Reduce pain
 - Promote joint function
 - Protect the joint from further damage

Exercise

- Best studied and most effective non-pharmacologic treatment is **EXERCISE!**
- Exercise will not “wear out” the joint!



Benefits of Regular Exercise



- Reduces pain
- Strengthen/corrects muscle imbalances
- Reduces joint stiffness/increases ROM
- Improved balance/coordination
- Controls weight

Benefits of Regular Exercise

- Improved mental healthy and QOL
- Improved sleep patterns
- Improved functional ability



How Should I Exercise With Arthritis?

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- Frequency:
 - Aerobic exercise 3-5x week
 - Resistance exercise 2-3x week
 - Flexibility/ROM exercises daily

- Intensity:
 - Light to moderate intensity exercises
 - Higher number of repetitions (10-15x)
 - Lower weight

RPE Scale	Rate of Perceived Exertion
10	Max Effort Activity Feels almost impossible to keep going. Completely out of breath, unable to talk. Cannot maintain for more than a very short time.
9	Very Hard Activity Very difficult to maintain exercise intensity. Can barely breath and speak only a few words
7-8	Vigorous Activity Borderline uncomfortable. Short of breath, can speak a sentence.
4-6	Moderate Activity Breathing heavily, can hold short conversation. Still somewhat comfortable, but becoming noticeably more challenging.
2-3	Light Activity Feels like you can maintain for hours. Easy to breathe and carry a conversation
1	Very Light Activity Hardly any exertion, but more than sleeping, watching TV, etc

- Time:
 - Greater than 150 min./week of aerobic exercise

- Type:
 - Aerobic activities with low joint stress
 - Resistance exercises
 - Flexibility and ROM exercises

- Gradual and individualized based on pain level
- Consider:
 - Age
 - Comorbidities
 - General mobility

How Do I Know How Much Is Too Much?

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Special Considerations for Exercising With Arthritis

- Avoid high intensity exercise with acute inflammation
- Recumbent bike may be more comfortable than treadmill
- Allow 5-10 min. to warm up with light intensity exercise

- Key Principle
 - Develop a program that minimizes pain while gradually progressing toward levels that provide greater functional ability.