

*Supplemental material is neither peer-reviewed nor thoroughly edited by CJASN. The authors alone are responsible for the accuracy and presentation of the material.*

## **Benefits and Barriers to and Desired Outcomes with Exercise in Patients with End Stage Kidney Disease**

Danielle Moorman MD MSc<sup>1</sup>, Rita Suri MD<sup>2</sup>, Swapnil Hiremath MD MPH<sup>3,4</sup>, Januvi Jegatheswaran MD<sup>3</sup>, Teerath Kumar MD<sup>3</sup>, Ann Bugeja MD<sup>3</sup>, Deborah Zimmerman MD MSc<sup>3,4</sup>

1. Department of Medicine, University of Ottawa, Ottawa Hospital, Ottawa ON, Canada
2. Division of Nephrology, Department of Medicine, Centre Hospitalier de l'Université de Montreal, Montreal QC, Canada
3. Division of Nephrology, Department of Medicine, University of Ottawa, Ottawa ON, Canada
4. Kidney Research Centre, Ottawa Hospital Research Institute, Ottawa, ON, Canada

### **Supplemental Table of Contents**

Supplemental Appendix: Exercise in Patients Treated with Dialysis Questionnaire

Supplemental Figure 1: Preferred Outcomes of an Exercise Program by Age

Supplemental Figure 2: Barriers to Exercise by Age

# Exercise in Patients Treated with Dialysis



**Kidney Research Centre**  

---

**Centre de recherche sur  
les maladies du rein**

## **Section 1: Your Current Activity**

1. During the **last 7 days**, did you walk for at least 10 minutes at a time on at least 3 days (check one box)?

Yes

No

2. During the **last 7 days**, did you participate in **moderate** physical activities on **at least 3 days** like carrying light loads, bicycling at a regular pace, or doubles tennis? Do not include walking (check one box).

Yes

No

3. During the **last 7 days**, did you participate in vigorous physical activities on at least 3 days like heavy lifting, aerobics, or fast bicycling (check one box)?

Yes

No

4. Can you climb one flight of stairs without assistance (check one box)?

Yes

No

5. Can you walk one block without assistance (check one box)?

Yes

No

## Section 2: Your Opinions about Exercise

Please indicate how much you agree or disagree with each of the following statements by putting a circle around the number below from 1 to 5 with 1 being strongly disagree to 5 strongly agree

1. I believe exercise would be beneficial for me.

Strongly Disagree ←————→ Strongly Agree  
1            2            3            4            5

2. I would exercise if advised by my doctor to do so.

Strongly Disagree ←————→ Strongly Agree  
1            2            3            4            5

3. I am concerned about the risks of exercise.

Strongly Disagree ←————→ Strongly Agree  
1            2            3            4            5

4. I think exercise is as important as other issues like blood pressure, diet, and fluid intake.

Strongly Disagree ←————→ Strongly Agree  
1            2            3            4            5

5. Exercise has many reported benefits. If you were to begin an exercise program, what are the **THREE MOST IMPORTANT** benefits **YOU** would want to get for yourself? Please put a check mark in **THREE** of the boxes below?

- Improve your sleep
- Improve your energy
- Improve your mood
- Decrease your cholesterol
- Decrease your blood sugar
- Improve your strength
- Decrease your risk of falls
- Decrease your weight
- Decrease your blood pressure
- Decrease your risk of getting heart disease
- Decrease complications of heart disease if you have it
- Decrease your risk of being hospitalised
- Increase the length of your life
- Help you stay independent
- Decrease restless legs
- Improve transplant candidacy
- Increase self-esteem
- Make new friends
- Other \_\_\_\_\_

6. There are many reasons why people treated with dialysis may not exercise.

Which of the following applies to you (circle the letter)?

- a. I exercise without difficulty (skip to section 3)
- b. I exercise but it is difficult
- c. I want to exercise but I have reasons that I cannot
- d. I just don't want to exercise (skip to section 4)

If you circled b or c: What are the reasons you cannot exercise or find it difficult? Check one box below for each question.

7. I am too tired to exercise.

- Yes
- No

8. I am too weak to exercise.

- Yes
- No

9. I am too sad (depressed) to exercise.

- Yes
- No

10. I don't want anyone to see me exercise.

- Yes
- No

11. I will get short of breath if I exercise.

Yes

No

12. I will get chest pain if I exercise.

Yes

No

13. I will get arthritis pain if I exercise.

Yes

No

14. I don't have time to exercise.

Yes

No

15. I can't travel to exercise.

Yes

No

16. I can't afford the cost to exercise.

Yes

No

17. I don't have anyone to exercise with.

Yes

No

*Supplemental material is neither peer-reviewed nor thoroughly edited by CJASN. The authors alone are responsible for the accuracy and presentation of the material.*

18. I don't know what exercises are safe for me.

Yes

No

19. I don't know how to make a good exercise program.

Yes

No

20. Are there other reasons that you might not exercise? If yes, please list any other reasons

---

---

---

### **Section 3: Exercise Program Preferences**

1. If someone taught you how to exercise safely, please indicate what type of exercise you might be willing to do. Resistance training includes things like lifting weights and using bands to work muscles. This type of exercise improves strength and decreases risk of falls. Aerobic exercise is doing things like walking fast, running, cycling. This type of exercise improves stamina and heart fitness. (check one box).

Resistance training (eg. weights, elastic bands for muscle strength)

Aerobic exercise (eg. walking, running, cycling, dancing)

Both

Neither

Other \_\_\_\_\_ (please list)



*Supplemental material is neither peer-reviewed nor thoroughly edited by CJASN. The authors alone are responsible for the accuracy and presentation of the material.*

2. If you were to exercise, how would prefer to exercise (check all that apply)?

- With other people
- With other dialysis patients
- By myself

3. If you were to exercise, where would you be willing to exercise? (check all that apply).

- Home
- Neighbourhood
- Hemodialysis Unit
- Gym
- Other \_\_\_\_\_(please list)

#### **Section 4: About You**

This information will help us figure out if people of different backgrounds want different things from an exercise study.

1. How old are you? \_\_\_\_\_years

2. What sex are you? (check one box)

- Male
- Female

3. What do you consider to be your ethnic background? (check one box)

- Aboriginal (includes Inuit, Metis, First Nations)

*Supplemental material is neither peer-reviewed nor thoroughly edited by CJASN. The authors alone are responsible for the accuracy and presentation of the material.*

- Arab (includes Egyptian, Kuwait, Libyan)
- Black (includes African, Nigerian, Somali)
- Chinese
- Filipino
- Japanese
- Korean
- Latin American (includes Chilean, Costa Rican, Mexican)
- South Asian (includes Bangladeshi, Punjabi, Sri Lanka)
- South East Asian (includes Vietnamese, Cambodian, Malaysian)
- West Asian (includes Afghan, Assyrian, Iranian)
- Caucasian
- Other (specify: \_\_\_\_\_)
- Multiple ethnicities (specify: \_\_\_\_\_)
- Prefer not to answer

4. Do you have any of the following medical conditions? Please select all that apply.

- Heart Attack
- Heart Failure (fluid in the lungs)
- Peripheral Vascular Disease (poor blood flow to your legs)
- Cerebrovascular Disease (such as stroke)
- Dementia (difficulty with memory)
- COPD (lung problem usually from smoking)
- Connective Tissue Disease (lupus, rheumatoid arthritis, scleroderma)
- Peptic Ulcer Disease (bleeding from your stomach or small intestine)

- Diabetes Mellitus (sugar diabetes)
- Hemiplegia (weakness on one side of your body)
- Leukemia (blood cancer)
- Malignant Lymphoma (cancer of lymph nodes)
- Solid Tumour (all other cancers, does not include skin cancer)
- Liver Disease
- AIDS (advanced HIV)
- Atrial Fibrillation
- Osteoarthritis

5. What type of dialysis do you do (check one box)?

- Peritoneal
- Hemodialysis

6. Has your weight decreased over the last year (check one box)?

- Yes
- No

7. Which option best describes your work status?

- Working Full Time (35 or more hours each week)
- Working Part Time (less than 35 hours each week)
- Disability
- Unemployed looking for work
- Unemployed not currently looking looking for work
- Student
- Retired
- Not in paid workforce (eg. homemaker)
- Prefer not to answer

8. What was your household income last year before taxes and other deductions?

- Less than \$10,000
- \$10,001 to \$24,999
- \$25,000 to \$74,999
- \$75,000 or greater
- Prefer not to answer

9. What is your marital status?

- Single
- Married or Common Law
- Separated or Divorced
- Widowed
- Prefer not to answer

10. What is the highest level of education you have completed?

- Elementary school or less
- High school graduation certificate
- Trades certificate
- College certificate or diploma
- University degree
- Postgraduate degree
- Prefer not to answer

## **Section 5: Conclusion**

*Supplemental material is neither peer-reviewed nor thoroughly edited by CJASN. The authors alone are responsible for the accuracy and presentation of the material.*

1. Would you potentially be interested in participating in a study to look at the risks and benefits of exercise in patients treated with dialysis?

Yes

No

2. Thank you for taking the time to complete our survey. Is there anything else you think we should know?

---

---

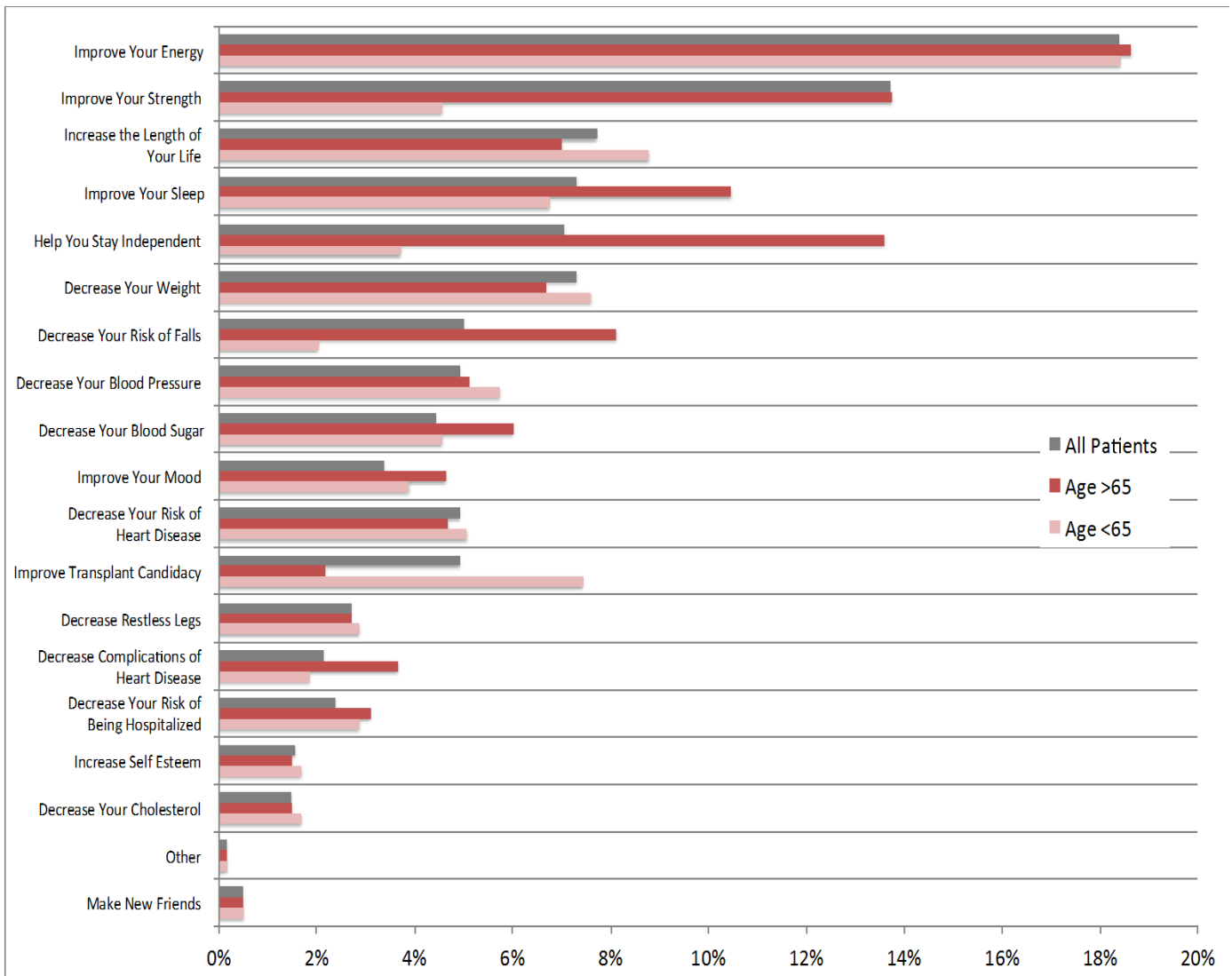
---

---

---

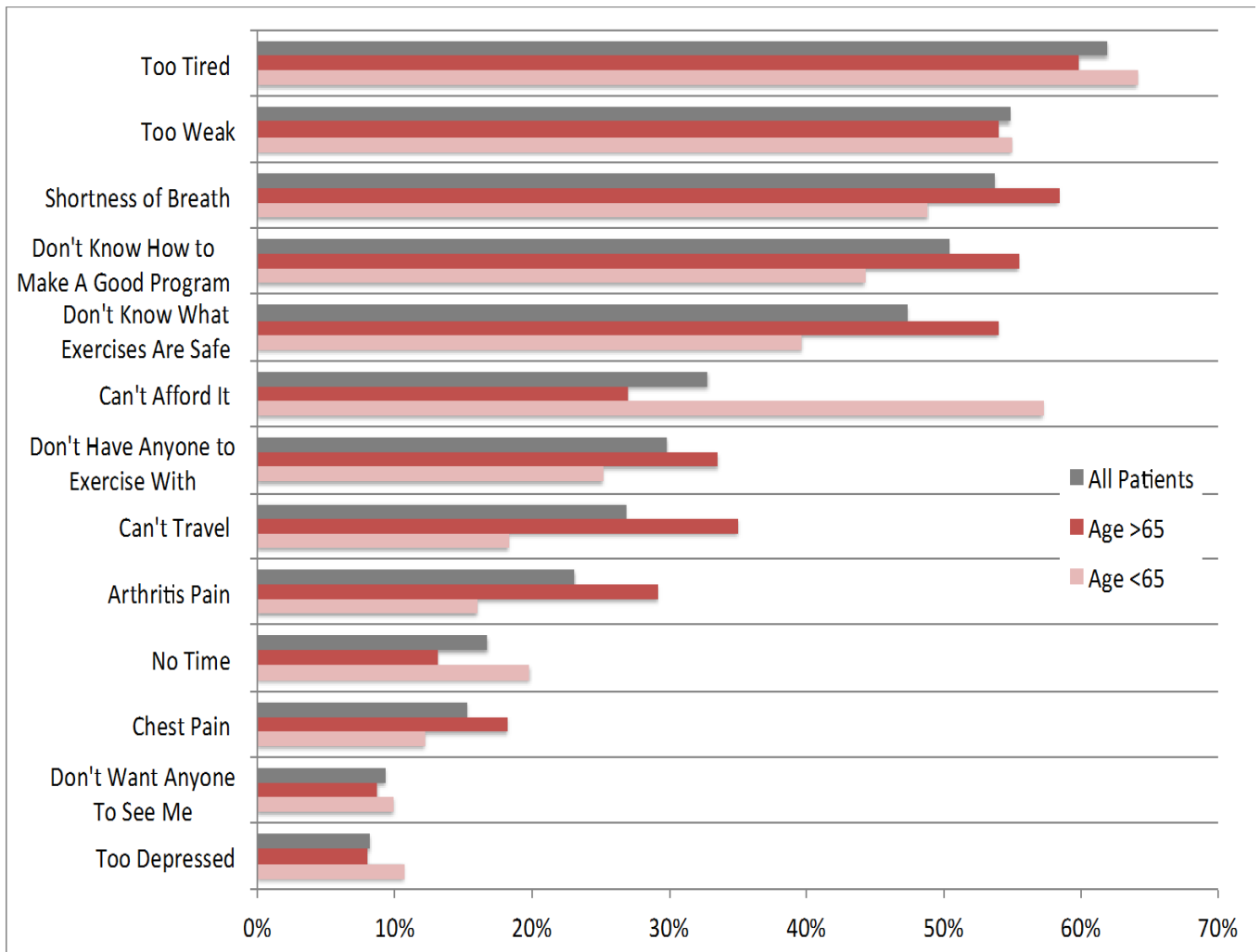
---

Supplemental material is neither peer-reviewed nor thoroughly edited by CJASN. The authors alone are responsible for the accuracy and presentation of the material.



Supplemental Figure 1: Preferred Outcomes of an Exercise Program by Age

Supplemental material is neither peer-reviewed nor thoroughly edited by CJASN. The authors alone are responsible for the accuracy and presentation of the material.



Supplemental Figure 2: Barriers to Exercise by Age