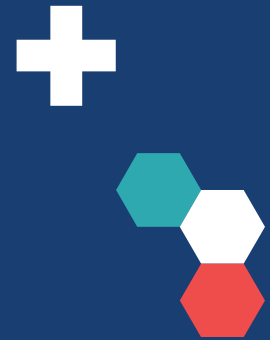




# Introducing the UK Exercise and Lifestyle in CKD Clinical Practice Guidelines



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International Transplantoux Symposium 2022

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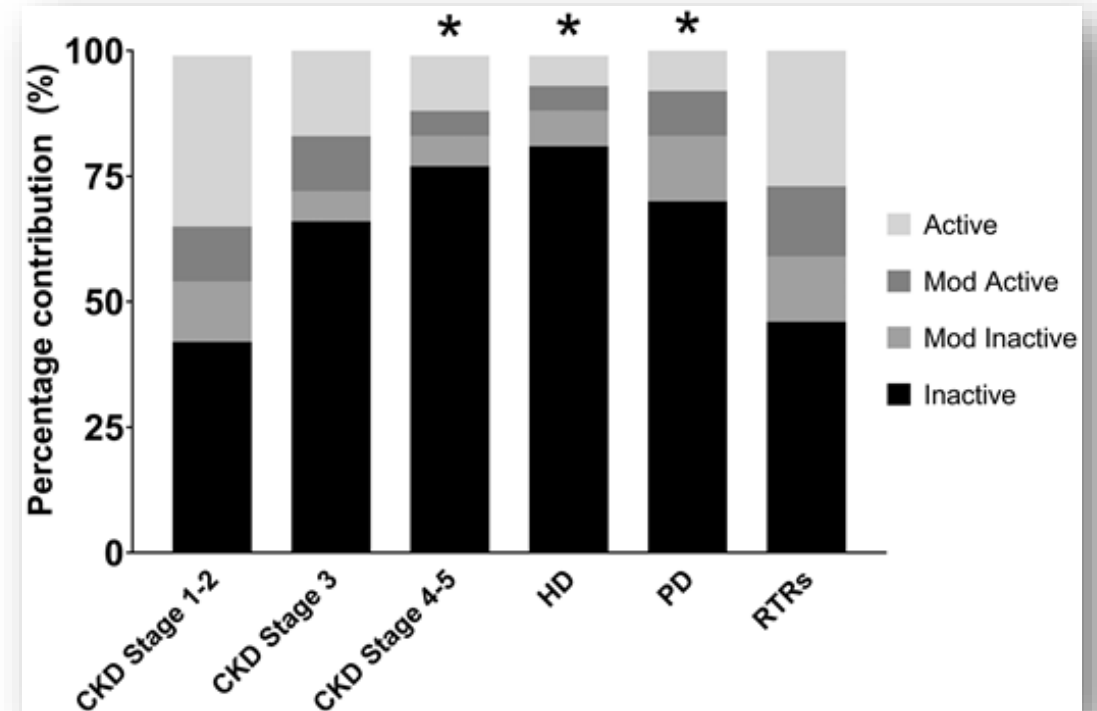
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# Acknowledgments

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- Dr Thomas J Wilkinson, Research Fellow, University of Leicester

# Introduction 1/2

- **Prevalence of physical inactivity is high** across all stages of kidney disease, and elevating activity levels would be greatly beneficial
- There is **limited consensus** on lifestyle and physical activity in those living with kidney disease



- In the UK CKD clinical guidelines, **only minor reference** is made to lifestyle

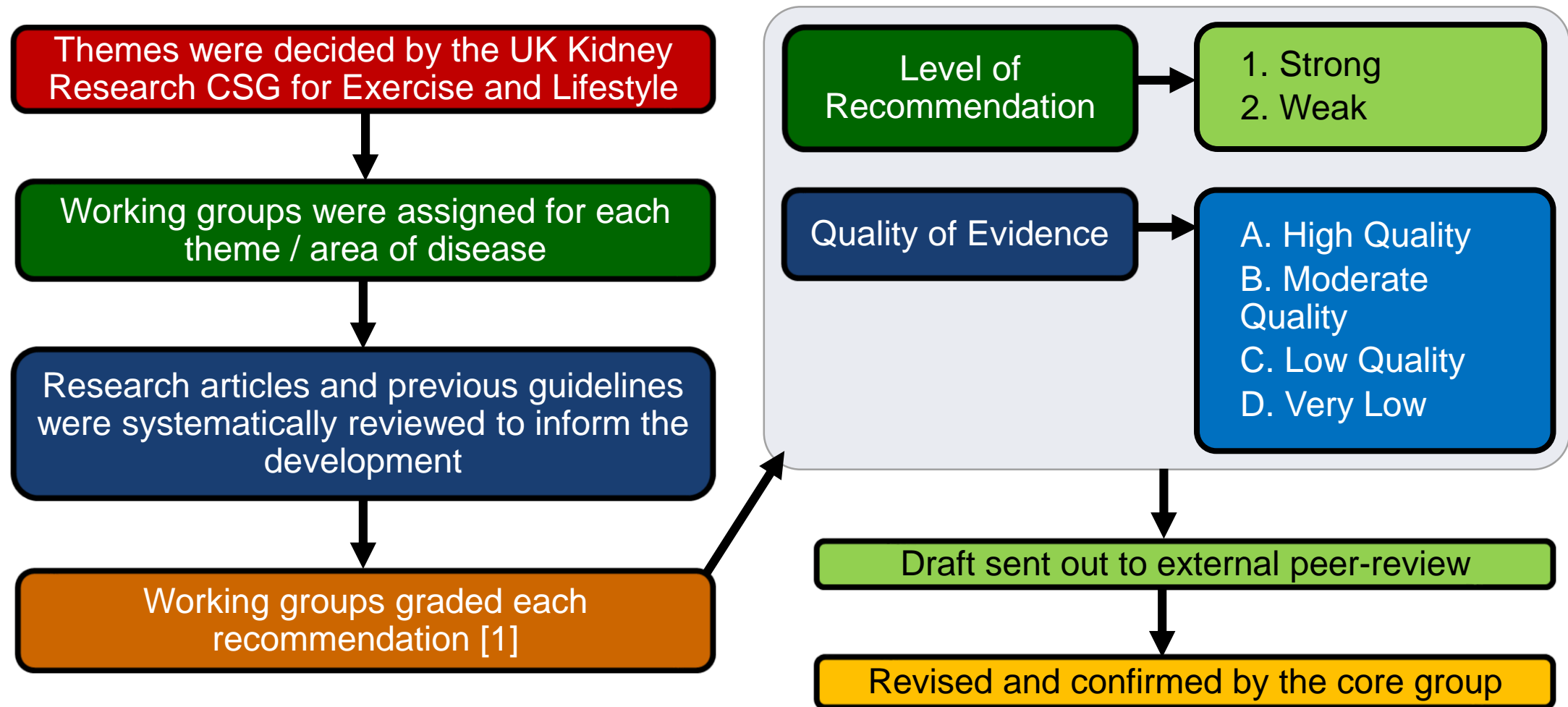
# Introduction 2/2

- In 2019, the **first ever UK clinical practice guidelines on exercise and lifestyle in CKD** were commissioned by the UK Kidney Association (previously Renal Association) – these would be NICE-endorsed



- Focus was exclusively around **physical activity and exercise**, diet was not included – although we did include **weight management**
- The document also includes ‘**implementation tips**’ to help practitioners and healthcare professionals apply guidelines to their practice

# Guideline development process

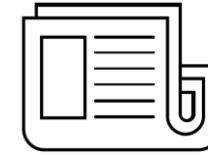




# Non-dialysis CKD headlines



# Non-dialysis headlines



- Recommend **150 moderate (or 75 vigorous) minutes of any physical activity** per week or a combination of the two [1B]
- Recommend **breaking up long periods of being sedentary** with light activity or standing [1B]
- Recommend that increasing physical activity levels can improve **blood pressure, physical function and capacity and health related quality of life** [1B-1C]
- Recommend a prescribed **combination of aerobic and strength training** exercises should be used to gain improvements in muscle function [1C]
- Suggest that undertaking exercise may **improve well-being** (ie. symptoms of depression and anxiety) [2C]



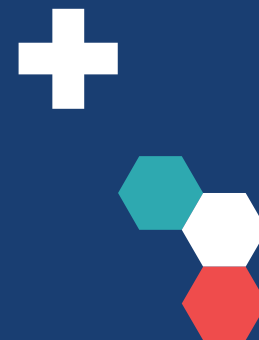
# Haemodialysis headlines



# Haemodialysis headlines



- Recommend that **physical activity and exercise should be encouraged** in the haemodialysis population where there are no contraindications [1C]
- Recommend that haemodialysis patients should aim for **150 minutes of moderate intensity activity a week (or 75 minutes of vigorous activity)** or a mixture of both as per the UK Chief Medical Officers' Guideline. *This may include a combination of exercise outside of dialysis (interdialytic) or exercise during dialysis (intradialytic)* [1B]
- Suggest that physical activity **may reduce risk of cardiovascular related and all-cause mortality** in the haemodialysis population [1C]
- Suggest that increased physical activity or exercise may have favourable effects on **blood pressure** [2C]

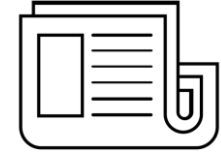


# Kidney transplant recipient headlines *and highlights*



Systematic review used to define effect of exercise can be found in **Wilkinson et al. (2022) Physical Therapy Reviews**

# Kidney transplant recipient headlines



- Recommend **150 moderate (or 75 vigorous) minutes of any physical activity** per week
- Structured exercise can **↑ exercise capacity, strength, physical function, QoL, and HDL**
- Exercise alone **cannot attenuate increases in body mass**
- **Aerobic exercise** should be performed at **>60% max. heart rate/VO<sub>2</sub>peak**)
- **Progressive resistance training** (upper/lower) at **>60% 1-RM** at least **2x/week**
- Encouraged to **minimise sedentary time**

# Kidney transplant recipient highlights 1/2

- **Post-transplant recommendations**

*“Immediate physical activity/exercise intervention immediately after transplant (<2 days) is not beneficial in increasing recovery or attenuating declines in physical function [2C]”*

- Small amount of evidence from two trials suggest that **exercise does not provide any additional benefits immediately after transplant [1-2]**
- Simple mobility should be encouraged, but **intensive physiotherapy/more structured exercise does not stop decline in exercise capacity or strength** immediately post-transplant

# Kidney transplant recipient highlights 2/2

- **Pre-transplant recommendations**

*“Prehabilitation may help increase pre-transplant physical activity levels and aid recovery post-transplant [2C]”*

- Limited evidence (currently) on role of prehabilitation in kidney transplant recipients [1]

Pilot study in USA suggests prehabilitation (1/week sessions, 44% <4 sessions, 33% >12 sessions) is feasible [2]

**↑ physical activity by 64%      ↓ length of stay by 50%**

# Kidney transplant

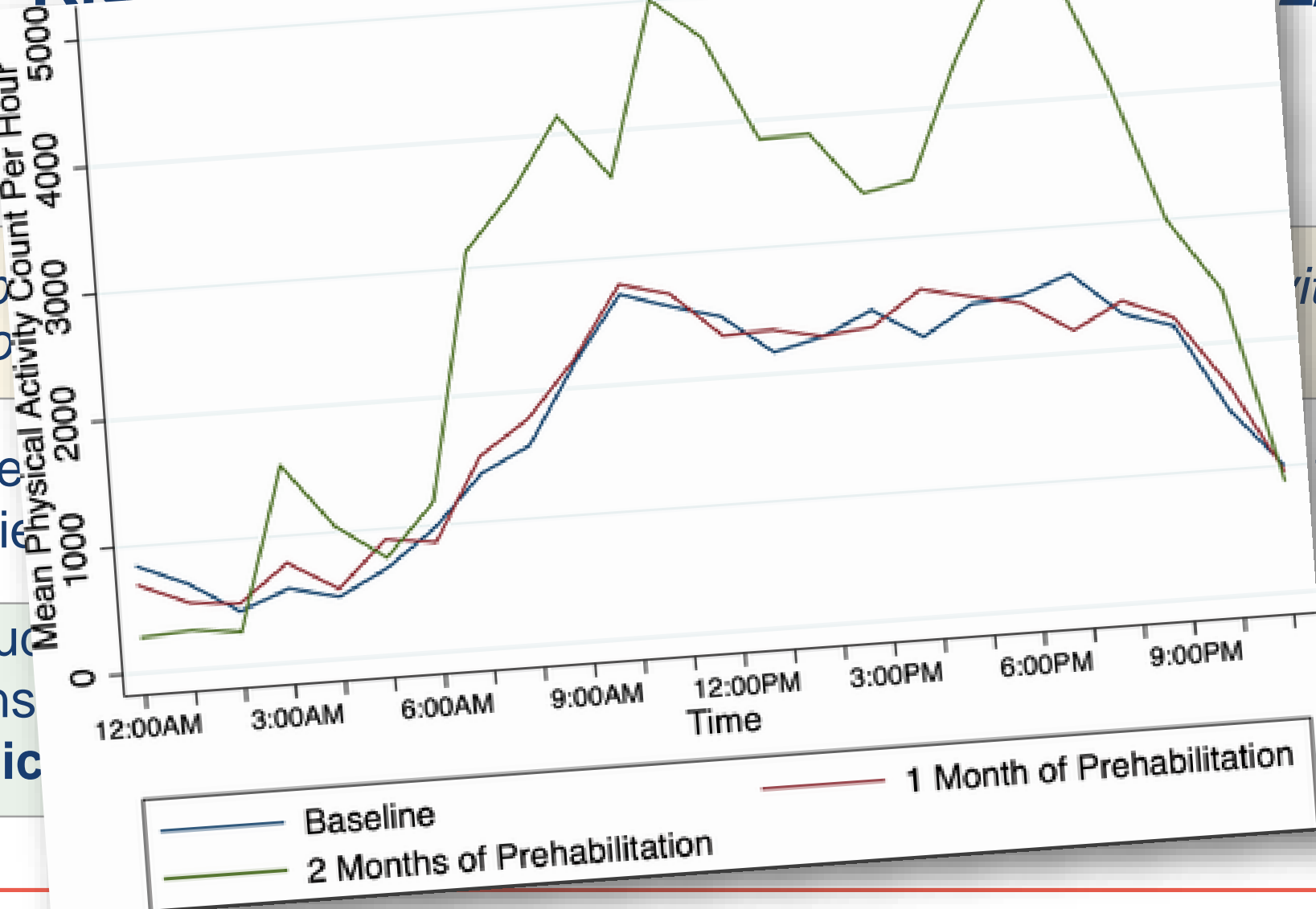
2/2

- Pre-tri

“Prehab  
aid reco

- Limited  
recipie

Pilot stud  
sessions  
↑ physic



ity levels and

transplant

% <4

# Alcohol, smoking, and drug use

- Other lifestyle considerations were made universal across all stages



**Smoking should be  
stopped [1A]**



**Alcohol consumption  
should be within  
national guidelines  
[1B]**



**Avoid all recreational  
drug use [1B]**

- Recommendations made in light of overwhelming evidence in both general population and kidney disease literature

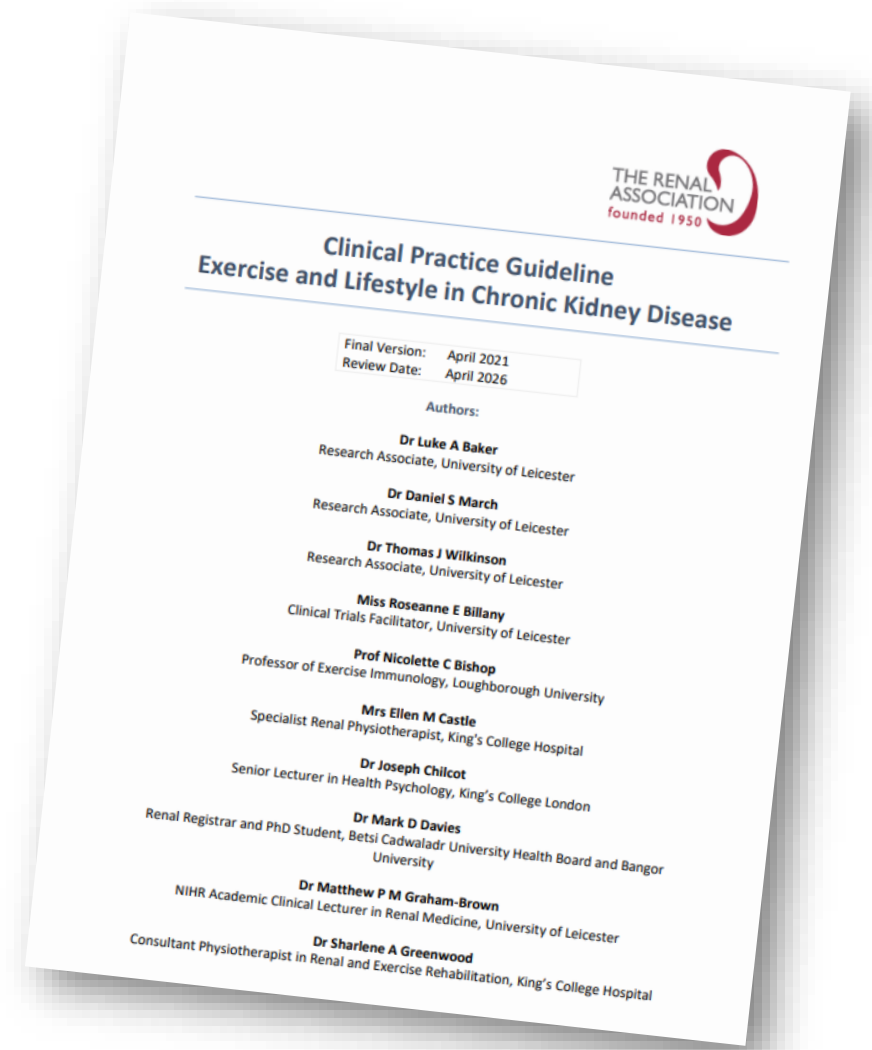


# Take home messages 1/2

- For **all kidney disease populations** it is recommended that they meet the UK Chief Medical Officer' Guideline for physical activity (however some physical activity is likely better than none)
- The **benefits of meeting these physical activity recommendations are compelling**, and the message is clear that being active provides a foundation for a longer, healthier and happier life
- If possible, structured programmes of physical activity (and/or exercise) should be supervised by an **appropriately trained** individuals (e.g., physiotherapist (including specialist renal if available), sport scientist, cardiac rehabilitation specialist)

# Take home messages 2/2

- <https://ukkidney.org/health-professionals/guidelines/exercise-and-lifestyle-chronic-kidney-disease>





# Thank you for listening

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