

# “Potassiofobia” and other disease-specific barriers of fruit and vegetable consumption after renal transplantation

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## Introduction

Life expectancy after renal transplantation is compromised due to a high prevalence of cardiovascular diseases. Poor fruit and vegetable consumption is associated with increased cardiovascular mortality (Figure 1), indicating the importance of a healthy fruit- and vegetable-rich diet. Nevertheless, renal transplant recipients (RTR) have an even lower fruit and vegetable consumption than the general population, of which the reasons have not been elucidated yet.

## Methods

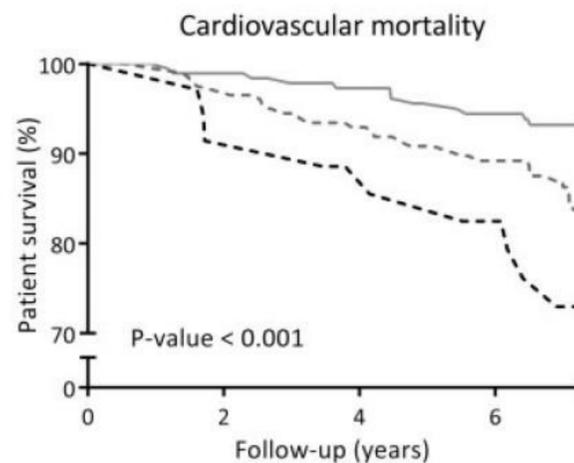
To explore the barriers and facilitators of fruit and vegetable consumption, a qualitative study was performed with 7 focus groups with patients (3), their family members (3) and health care professionals (1).

## Results

Several disease-related barriers were identified. Barriers related to the previous potassium restriction at time of end-stage renal disease included ‘potassiofobia’ (avoiding fruit and vegetables because of fear for hyperkalemia) and difficulties with a new routine after limiting fruit and vegetables consumption for years.

Other disease-related barriers and facilitators were related to physical health (e.g. fatigue), medications and competing priorities (e.g. social activities).

Within the generic barriers, social support and food knowledge and cooking skills (‘food literacy’) were most relevant.



**Figure 1** Kaplan–Meier curve for cardiovascular mortality according to categories of vegetable consumption (0–1, 2, 3 serving spoons per day) of RTR.

**Table 1** Characteristics of focus groups of RTR, family members and health-care professionals

Focus group	N	Age range	Gender		Dialysis before Tx	Potassium restriction before Tx	Time since Tx in months
			M	F			
Patients (1)	6	40-73	3	3	4	3	4-57
Patients (2)	6	32-66	3	3	4	2	8-55
Patients (3)	7	46-68	6	1	3	3	4-57
Family members (1)	5	49-68	3	2	2*	1*	7-60*
Family members (2)	4	52-73	0	4	3*	2*	5-39*
Family members (3)	6	62-77	3	3	3*	4*	3-26*
Professionals (1)	5	25-61	1	4	-	-	-

\*of the patients. Abbreviations: F: female; M: male; Tx: transplantation

**Table 2** Examples of barriers of fruit and vegetable consumption after renal transplantation

Theme	Barriers for fruit and vegetable consumption	
	Disease-related barriers	
Transition in diet	‘Potassiofobia’	Difficulties with new routine
Physical health	Fatigue / lack of energy	
Medication	Cravings due to prednisolone	Food-drug interactions
Competing priorities	Social activities	Burden of disease management
	Generic barriers	
Limited food literacy	Limited skills for practicing diet	Overestimating consumed vegetables
Social support	Lack of social support	Partner is ‘food gatekeeper’
Other	Taste / food preference	Negative attitude / lack of motivation
	Poor pre-existent food habits	Limited financial resources

## Conclusion

In patients with chronic diseases, disease-related barriers may hamper the adherence to a healthy diet. After renal transplantation, ‘potassiofobia’ and other dietary transition barriers are identified as disease-related barriers for fruit and vegetable consumption. ‘Potassiofobia’ is important to address, as low potassium intake is associated with worse outcomes after kidney transplantation. By exploring the presence of barriers in dietary counseling, problem-solving strategies can be used to overcome these barriers.



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