

Nutrition to Support Symptom Management

Ann-Maree Randall
Dietitian, RSC Nepean Hub



Malnutrition in RSC across NSW

- Malnutrition prevalence
 - **48% conservative care**
 - **59% symptom support**
- Change in nutritional status
 - Conservative
 - 25% improved nutritional status
 - 55% maintained nutritional status
 - Symptom Support
 - 33% improved nutritional status
 - 40% maintained nutritional status

Symptom Burden

Symptoms amenable to nutrition interventions:

- Anorexia
- Nausea & dry retching
- Dry mouth
- Taste changes
- Constipation
- Gastroparesis
- Dyspnoea
- Peripheral oedema
- Hyperphosphatemic pruritus
- Hypo or hyperkalaemia
- Hypo or hyperglycaemia

Symptom Prevalence in RSC

Symptom	RRT N=540	Conservative N=751	Severity as Severe or Overwhelming
Anorexia	54%	50%	11%
Mouth Problems	53%	54%	11%
Nausea	44%	25%	5%
Constipation	40%	37%	8%
Vomiting	23%	11%	2%
Diarrhoea	23%	17%	4%

Symptom Management


NEPHROLOGY



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Review Article

Nutrition in Renal Supportive Care: Patient-driven and flexible

Jessica Stevenson , Anthony Meade, Ann-Maree Randall, Karen Manley, Stephanie Notaras, Susan Heaney, Maria Chan, Alison Smyth, Elizabeth Josland, Frank Patrick Brennan, Mark A Brown

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Anorexia

- Etiology is complex and multifactorial
 - Uraemic toxins
 - Systemic inflammation
 - Dry mouth & taste changes
 - Gastrointestinal motility disorders
 - Impaired gastric emptying
 - Altered satiety hormones
- Commonly leads to inadequate nutritional intake
- Contributes to PEW and malnutrition, decline in physical function and independence and reduced QoL

Nutritional Management

- Avoid any unnecessary dietary restrictions
- Meal timing
- Food fortification
- Eating environment
- Consider nutritional supplements



Dry Mouth

- Common in stage IV & V CKD
- Salivary composition is altered
- As little as an 8% decrease in body water can virtually diminish salivary flow and increase saliva solute levels
- Increased salivary sodium combined with salt intake
→ drives thirst

Taste Changes

- In stage IV and V CKD ability to detect and perceive taste is impaired
- Altered taste is linked with:
 - Individual taste genetics
 - Fluid imbalance
 - Toxin accumulation
 - Changed salivary composition
- Taste alterations significantly influences eating & food enjoyment
- Associated with increased prevalence of other nutrition-related symptoms

Will Mouth Wash Solutions of Water, Salt, Sodium Bicarbonate or Citric Acid Improve Upper Gastrointestinal Symptoms in Chronic Kidney Disease



Manley Karen Joy.¹

N=42

Interventional cross over study

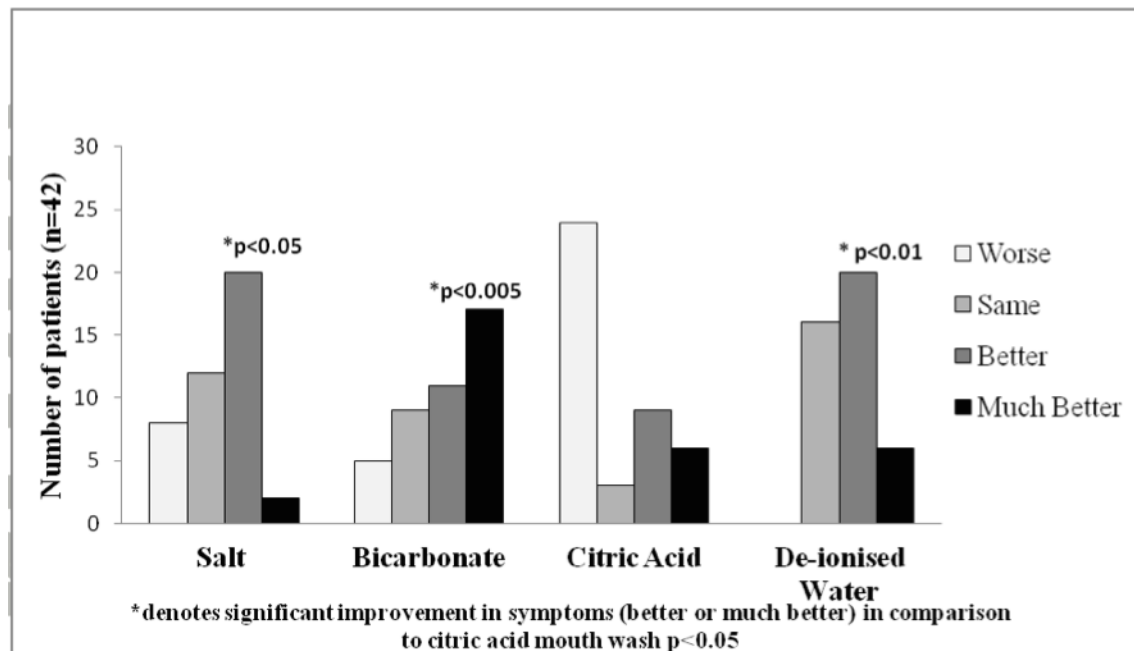
Prevalence of upper GI symptoms:

100% anorexia

90% dry mouth & taste changes

88% nausea

Sodium bicarbonate found to give greatest improvement to symptom control in 66% of subjects



Sodium Bicarbonate Mouthwash

1 teaspoon sodium bicarbonate (buy from supermarket) mixed into **500ml water**

Rinse your mouth out regularly throughout the day (don't drink this mouthwash).

Aim to finish this 500ml mouthwash in 24 hours.

Nutritional Management

Dry Mouth

- Avoiding excess salt intake if thirst present
- Keep lips and mouth moist
- Stimulate saliva production

Altered Taste

- Maintaining good oral hygiene
- Rinse mouth regularly
- Dietary strategies to counteract
 - Lack of taste
 - Metallic taste
 - Bitter taste



Nausea & Dry Retching

- Consider etiology of nausea
- Elevated urea can produce a bitter tastant that is present along the entire digestive tract
- Bitter tastant can cause nausea, dry-retching and vomiting
- Bitter tastes can also slowing gastric emptying

Nutritional Management

- Small, regular meals
- Avoid skipping meals
- Avoid strong smells
- Rinse mouth regularly
- Dry or bland foods
- Very cold foods or drinks
- Using ginger or ginger products
- Anti-emetics
- Review protein intake



Constipation

- Associated or worsened by:
 - Some medications
 - Restricted fluid intake
 - Poor mobility & inactivity
 - Reduced intake
- Can exacerbate poor appetite, early satiety, nausea, hyperkalemia and reduced QOL.

Nutritional Management

- Increase dietary fibre
- Moderate amounts fruits and vegetables
(low potassium options as indicated)
- Encourage wholegrains
- Fibre supplements
- Encourage fluid intake (within allowance)
- Regular physical activity



Mrs A, 89 year old woman with ESKD choosing a non-dialysis pathway.

She lives with elderly husband.

Her appetite has been declining the past few months. Meal portions have become smaller, frequently skipping evening meal due to fatigue and lack of energy. Describes a very dry mouth and a bitter taste making foods previously enjoyed difficult to manage.

She continues to diligently follow strict dietary principals of low sugar and saturated fat to prevent diabetes and heart disease.

Nutritional Assessment

- Detailed assessment of symptoms impacting dietary intake and quality of life is imperative
- Dietary changes can improve symptoms
- Negotiate required changes with patients
- Important not to provide non-specific advice on nutrition
- Ensure changes recommended are justified and will have a positive impact

- Symptoms will regularly change in nature and severity therefore regular nutrition review is essential
- Management of symptoms needs a multidisciplinary focus

Questions?

- Acknowledgements:

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- References:

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Thank You

Ann-Maree Randall
Renal Dietitian, Nepean & Western Sydney
Ann-Maree.Randall@health.nsw.gov.au
pH. 0429 942 184 or 4734 3812

