



Complete Summary

GUIDELINE TITLE

Water/fluid in pre-dialysis patients.

BIBLIOGRAPHIC SOURCE(S)

Voss D. Water/fluid in pre-dialysis patients. Westmead NSW (Australia): CARI - Caring for Australians with Renal Impairment; 2005 Dec. 4 p. [2 references]

Voss D. Water/fluid in predialysis patients. Nephrology 2005 Dec;10(S5):S161-92.

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

SCOPE
METHODOLOGY - including Rating Scheme and Cost Analysis
RECOMMENDATIONS
EVIDENCE SUPPORTING THE RECOMMENDATIONS
BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS
IMPLEMENTATION OF THE GUIDELINE
INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT
CATEGORIES
IDENTIFYING INFORMATION AND AVAILABILITY
DISCLAIMER

SCOPE

DISEASE/CONDITION(S)

Chronic kidney disease (CKD)

GUIDELINE CATEGORY

Management

CLINICAL SPECIALTY

Family Practice
Internal Medicine
Nephrology

INTENDED USERS

Physicians

GUIDELINE OBJECTIVE(S)

To assess the recommended daily fluid intake

TARGET POPULATION

Patients with chronic kidney disease

INTERVENTIONS AND PRACTICES CONSIDERED

Adjustment of fluid intake (increase or decrease) based on clinical state of patient, including degree of reduced glomerular filtration rate (GFR), edema, and hypertension

MAJOR OUTCOMES CONSIDERED

- Fluid output
- Hypertension
- Pulmonary edema
- Glomerular filtration rate

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Databases searched: Medical Subject Heading (MeSH) terms and text words for kidney disease were combined with MeSH terms and text words for drinking then combined with the Cochrane highly sensitive search strategy for randomised controlled trials and search filters for identifying prognosis and aetiology studies. The search was carried out in Medline (1996–November Week 2 2003). The Cochrane Renal Group Trials Register was also searched for trials not indexed in Medline.

Date of searches: 27 November 2003.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Levels of Evidence

Level I: Evidence obtained from a systematic review of all relevant randomized controlled trials (RCTs)

Level II: Evidence obtained from at least one properly designed RCT

Level III: Evidence obtained from well-designed pseudo-randomized controlled trials (alternate allocation or some other method); comparative studies with concurrent controls and allocation not randomized, cohort studies, case-control studies, interrupted time series with a control group; comparative studies with historical control, two or more single arm studies, interrupted time series without a parallel control group

Level IV: Evidence obtained from case series, either post-test or pretest/post-test

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Recommendations of Others. Recommendations regarding fluid intake in patients with chronic kidney disease and end-stage kidney disease from the following groups were discussed: Kidney Disease Outcomes Quality Initiative, British Renal Association, Canadian Society of Nephrology, and European Dialysis & Transplant Nurses Association/European Renal Care Association.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Definitions for the levels of evidence (I–IV) can be found at the end of the "Major Recommendations" field.

Guidelines

No recommendations possible based on Level I or II evidence

Suggestions for Clinical Care

(Suggestions are based on Level III and IV sources)

- Fluid intake should be adjusted to the clinical state of the patient, taking into account the degree of reduced glomerular filtration rate (GFR), oedema, and hypertension management. (**Opinion**)

Points for Increased Fluid Intake

High fluid intake constitutes part of management of renal conditions such as nephrolithiasis and urinary tract infections (Pearl, 2001).

Fluid depletion, from limiting fluid intake or the over-zealous use of diuretic therapy, can aggravate pre-existing chronic kidney disease (CKD). Patients who need to eliminate their daily osmotic load, or those with a salt-losing nephropathy, may have a high obligatory fluid output, and fluid restriction may be harmful.

Points for Reduced Fluid Intake

Once kidney disease is well established, the adverse effects of a high fluid intake often outweigh the benefits. Excess load on the myocardium, reduced control of hypertension, and the risk of pulmonary oedema are the most common.

Sodium and water retention results in oedematous states, and symptoms of fluid overload— especially reduced exercise tolerance and paroxysmal nocturnal dyspnea—reduce quality of life.

Once fluid management of the patient requires diuretics, a liberal fluid intake should be curbed. Control of hypertension in established CKD includes limited sodium and water intake and the use of diuretics.

Through education, patients with CKD and oedema should follow a reduced fluid intake regimen, in combination with a reduced sodium intake. Fluid and salt intake are often inseparable. Addressing the patient's salt intake often has a secondary benefit in reduced thirst, water demand, and improved oedema and hypertension control.

Hyperglycaemia exacerbates thirst and good glycaemic control in diabetic patients can reduce their thirst drive.

Definitions:

Levels of Evidence

Level I: Evidence obtained from a systematic review of all relevant randomized controlled trials (RCTs)

Level II: Evidence obtained from at least one properly designed RCT

Level III: Evidence obtained from well-designed pseudo-randomized controlled trials (alternate allocation or some other method); comparative studies with concurrent controls and allocation not randomized, cohort studies, case-control studies, interrupted time series with a control group; comparative studies with historical control, two or more single arm studies, interrupted time series without a parallel control group

Level IV: Evidence obtained from case series, either post-test or pretest/post-test

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

REFERENCES SUPPORTING THE RECOMMENDATIONS

[References open in a new window](#)

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for each recommendation (see "Major Recommendations").

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate management of fluid intake in patients with chronic kidney disease

POTENTIAL HARMS

Fluid depletion, from limiting fluid intake or the over-zealous use of diuretic therapy, can aggravate pre-existing chronic kidney disease. Patients who need to eliminate their daily osmotic load, or those with a salt-losing nephropathy, may have a high obligatory fluid output, and fluid restriction may be harmful.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

Implementation and Audit

Regular assessment at clinic visit of fluid status, dietary reassessment and body weight recording, with consolidation of education are recommended to help patients follow the water restriction advice.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Living with Illness

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Voss D. Water/fluid in pre-dialysis patients. Westmead NSW (Australia): CARI - Caring for Australians with Renal Impairment; 2005 Dec. 4 p. [2 references]

Voss D. Water/fluid in predialysis patients. Nephrology 2005 Dec;10(S5):S161-92.

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2005 Dec

GUIDELINE DEVELOPER(S)

Caring for Australasians with Renal Impairment - Disease Specific Society

SOURCE(S) OF FUNDING

Industry-sponsored funding administered through Kidney Health Australia

GUIDELINE COMMITTEE

Not stated

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

David Harris, Convenor (Westmead, New South Wales); Merlin Thomas (Prahran, Victoria); David Johnson (Woolloongabba, Queensland); Kathy Nicholls (Parkville, Victoria); Adrian Gillin (Camperdown, New South Wales)

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

All guideline writers are required to fill out a declaration of conflict of interest.

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the [Caring for Australasians with Renal Impairment Web site](#).

Print copies: Available from Caring for Australasians with Renal Impairment, Locked Bag 4001, Centre for Kidney Research, Westmead NSW, Australia 2145

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- The CARI guidelines. A guide for writers. Caring for Australasians with Renal Impairment. 2006 May. 6 p.

Electronic copies: Available from the [Caring for Australasians with Renal Impairment \(CARI\) Web site](#).

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI Institute on April 1, 2008.

COPYRIGHT STATEMENT

This NGC summary is based on the original guideline, which is subject to the guideline developer's copyright restrictions.

DISCLAIMER

NGC DISCLAIMER

The National Guideline Clearinghouse™ (NGC) does not develop, produce, approve, or endorse the guidelines represented on this site.

All guidelines summarized by NGC and hosted on our site are produced under the auspices of medical specialty societies, relevant professional associations, public or private organizations, other government agencies, health care organizations or plans, and similar entities.

Guidelines represented on the NGC Web site are submitted by guideline developers, and are screened solely to determine that they meet the NGC Inclusion Criteria which may be found at <http://www.guideline.gov/about/inclusion.aspx> .

NGC, AHRQ, and its contractor ECRI Institute make no warranties concerning the content or clinical efficacy or effectiveness of the clinical practice guidelines and related materials represented on this site. Moreover, the views and opinions of developers or authors of guidelines represented on this site do not necessarily state or reflect those of NGC, AHRQ, or its contractor ECRI Institute, and inclusion or hosting of guidelines in NGC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding guideline content are directed to contact the guideline developer.

© 1998-2009 National Guideline Clearinghouse

Date Modified: 3/9/2009

