Chronic Kidney Disease Evidence Based Nutrition Practice Guidelines

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Objectives

• Define evidence-based CKD nutrition recommendations
• Guide practice decisions that integrate medical, nutritional and behavioral strategies
• Provide the RD with data to make recommendations to adjust MNT or recommend other therapies to achieve desired outcomes
• Define the highest quality of care

Stages of Chronic Kidney Disease

Table 1: Chronic Kidney Disease: A Clinical Action Plan

| Stage | Description | GFR and eGFR (mL/min/1.73 m²) | Action*
|-------|-------------|-------------------------------|--------
| 1      | Onset (worst stage I) | ≤ 60 | Check blood pressure, maintain fluid and sodium restriction, maintain normal blood glucose, make healthy lifestyle changes, check urine for protein.
| 2      | Diabetic nephropathy (DN) (stage II) | 60-45 | Education, monitoring, maintaining blood pressure, urine protein.
| 3      | Nephropathy (DN) (stage III) | 45-30 | Education, monitoring, maintaining blood pressure, urine protein.
| 4      | Nephropathy (DN) (stage IV) | 30-15 | Education, monitoring, maintaining blood pressure, urine protein.
| 5      | Nephropathy (DN) (stage V) | < 15 | Education, monitoring, maintaining blood pressure, urine protein.

Executive Summary of Recommendations

Chronic Kidney Disease
Evidence-Based Nutrition Practice Guidelines

www.andl evidencelibrary.com
Evidence-Based Dietetics Practice

the use of systematically reviewed scientific evidence in making food and nutrition practice decisions by integrating best available evidence with professional expertise and client values to improve outcomes.

Target CKD Population

- Adult (19 - 44 yrs)
- Middle Age (45 - 64 yrs)
- Aged (65 - 79 yrs)
- Male and Female

Guideline Overview

Focus of MNT Guidelines:

Adults with CKD
  - stages 1 - 5,
  - including post kidney transplant
  - not on dialysis.

MNT & CKD

Scientific evidence supports MNT to ↑ effectiveness of therapy for CKD.

Topics include:
- Medical nutrition therapy and dietitian intervention
- Energy needs
- Protein needs
- CKD-bone mineral disorder
- Anemia
- Diabetes
- Obesity
- Hypertension
- Disorders of lipid metabolism
- Physical activity
- Fish oil therapy
Evidence-based nutrition practice guidelines are developed to help dietetic practitioners, patients and consumers make shared decisions about health care choices in specific clinical circumstances. If properly developed, communicated and implemented, guidelines can improve care.

Statement of Intent

Disclaimer

While A.N.D. evidence-based nutrition practice guidelines represent a statement of best practice based on the latest available evidence at the time of publishing, they are not intended to overrule professional judgment. Rather, they may be viewed as a relative constraint on individual clinician discretion in a particular clinical circumstance. The independent skill and judgment of the health care provider must always dictate treatment decisions. These nutrition practice guidelines are provided with the express understanding that they do not establish or specify particular standards of care, whether legal, medical or other.

Each Recommendation is Rated:
• Strong,
• Fair,
• Weak,
• Consensus, or
• Insufficient Evidence

Each Recommendation Statement is:
• Conditional or
• Imperative
### Conditional statements
- Clearly define a specific situation and contain conditional text that would limit their applicability to specified circumstances or to a sub-population group.
- Can be stated in if/then terminology.
  - If an individual does not eat food sources of omega-3 fatty acids, then 1g EPA and DHA supplements may be recommended for secondary prevention.

### Imperative recommendations
- Broadly applicable to the target population.
- Stated as “require,” or “must,” or “should achieve certain goals.”
- Portion control should be included as part of a comprehensive weight management program. Portion control at meals and snacks results in reduced energy intake and weight loss.

### MNT and CKD Topics
- Assessment of:
  - Food/Nutrition-Related History
  - Anthropometric Options
  - Biochemical Parameters
  - CKD-Mineral and Bone Disorders
  - Medical/Health History
  - Protein Intake
  - Energy Intake
  - Phosphorus
  - Calcium
  - Vitamin D Therapy
  - Anemia
  - Management of Hyperglycemia in Diabetes and CKD

- Multi-Faceted Approach to Intervention in Diabetes and CKD
- Multi-Faceted Approach to Intervention in Dyslipidemias & CKD
- Education on Self-Management Behaviors
- Sodium
- Fish Oil/Omega-3 Fatty Acids
- Physical Activity
- Coordination of Care
- Multivitamin Supplementation
- Potassium
- Monitor/Evaluate Biochemical Parameters
- Monitor/Evaluate Adherence to Nutrition and Lifestyle
Chronic Kidney Disease

Executive Summary of Recommendations

CKD: Medical Nutrition Therapy

• Provided by an RD is recommended for individuals with CKD (stages 1-5, including post kidney transplant).

• Prevents and treats
  • protein-energy malnutrition and
  • mineral and electrolyte disorders and
  • minimizes the impact of other comorbidities on the progression of kidney disease (e.g., diabetes, obesity, hypertension and disorders of lipid metabolism). Studies regarding effectiveness of MNT report significant improvements in anthropometric and biochemical measurements sustained for at least one year.

Strong Imperative

CKD: Initiation of MNT

Referral for MNT per federal or state guidelines, should be initiated at diagnosis of CKD, to

• maintain adequate nutritional status,
• prevent disease progression and
• delay renal replacement therapy (RRT).

MNT should be initiated at least 12 mo prior to anticipation of RRT (dialysis or transplant).

Strong Imperative
CKD: Frequency of MNT

Depending on the care setting and the initiation of MNT, the RD should monitor the nutritional status of individuals with CKD every one to three months and more frequently if there is inadequate nutrient intake, protein-energy malnutrition, mineral and electrolyte disorders or the presence of an illness that may worsen nutritional status, as these are predictive of increased mortality risk.

Research re time requirements indicate ~ hrs / mo for up to 1 yr may be required to provide an effective intervention.

Strong Conditional

CKD: Initial Assessment of Food/Nutrition-Related History

RD should assess the food- and nutrition-related history of adults with CKD (including post kidney transplant), including but not limited to the following:

- Food and nutrient intake: diet history, diet experience intake of macronutrients and micronutrients, as appropriate
- Medication (Rx / OTC): dietary supplements (vit, min, protein, etc), herbal or botanical
- Knowledge, beliefs or attitudes: readiness to change nutrition & lifestyle behaviors
- Behavior
- Factors affecting access to food and food and nutrition-related supplies: safe food and meal availability

Effectively determine nutrition diagnoses and plan nutrition interventions. Inability to achieve optimal nutrient intake may contribute to poor outcomes.

Consensus

CKD: Reassessment of Food/Nutrition-Related History

Subsequent visits: reassess the food- or nutrition-related history related to changes in other assessment parameters (laboratory and anthropometric changes), including but not limited to the following:

- Food and nutrient intake, targeted to changes in biochemical parameters
- Medication, dietary supplements, herbal or botanical supplement use
- Knowledge, beliefs or attitudes
- Behavior
- Factors affecting access to food and food and nutrition-related supplies.

Explain changes in the other assessment parameters

Plan additional nutrition interventions. Inability to achieve optimal nutrient intake may contribute to poor outcomes.

Consensus

Imperative
CKD: Use Clinical Judgment in Assessing Body Weight

Due to the absence of standard reference norms in the CKD population (CKD, the RD should use clinical judgment to determine which data to include in estimations of body weight:

- Actual measured weight
- History of weight changes (both long-term and recent)
- Serial weight measurements, monitored longitudinally
- Adjustments for suspected impact of edema, ascites and polycystic organs.

Body weight estimates are used for calculation of nutritional needs, such as protein and energy requirements.

Body weight can be difficult to determine because as kidney function declines, the ability to regulate fluid balance may be compromised and multiple factors must be considered.

Consensus Imperative

CKD: Use Published Weight Norms with Caution

Other published weight norms in the anthropometric assessment of individuals with CKD (including post kidney transplant), but each norm has significant drawbacks and must be used with caution.

Body weight estimates are used for calculation of nutritional needs, such as protein and energy requirements.

Body weight can be difficult to determine because as kidney function declines, the ability to regulate fluid balance may be compromised and multiple factors must be considered.

- Ideal Body Weight (IBW)
  - Associated with the lowest mortality for a given height, age, sex and frame size and is based on the Metropolitan Life Insurance Height and Weight Tables
  - Caution: Not generalizable to the CKD population and data-gathering methods were not standardized.

- Hamwi Method
  - Determines the optimal body weight.
  - Caution: A quick and easy method for determining optimal body weight, but has no scientific data to support its use

Consensus Conditional

- Standard Body Weight, NHANES II (SBW as per KDOQI Nutrition Practice Guidelines)
  - Describes the median body weight of average Americans from 1976 to 1980 for height, age, sex and frame size.
  - Caution: Although data is validated and standardized and uses a large database of ethnically-diverse groups, data is provided only on what individuals weigh, not what they should weigh in order to reduce morbidity and mortality.

Consensus Conditional
CKD: Use Published Weight Norms with Caution

• **Body Mass Index (BMI)**

  • Defines generalized obesity and CKD research, specific to dialysis patients, has identified that patients at higher BMIs have a lower mortality risk.

  • *Caution: The researchers may not have statistically adjusted for all confounders related to comorbid conditions occurring in CKD on dialysis (diabetes, malignancy, etc) and it is unclear how it may relate to CKD patients not on dialysis.*

CKD: Use Published Weight Norms with Caution

• **Adjusted Body Weight (ABW)**

  • Based on the theory that 25% of the excess body weight (adipose tissue) in obese patients is metabolically active tissue. KDOQI supports the concept of subtracting 25% for obese patients and adding 25% for underweight patients.

  • *Caution: This has not been validated for use in CKD and may either overestimate or underestimate energy and protein requirements.*

CKD: Assessment of Body Composition

The RD should assess the body composition of individuals with CKD (including post kidney transplant).

Studies suggest that CKD patients exhibit altered body composition, as compared to healthy individuals.

**Fair Imperative**

CKD: Methodologies for Body Composition Assessment

Use any valid measurement methodology, such as

• anthropometrics (including waist circumference and BMI)
• body compartment estimates.

Currently, there is no reference standard for assessing body composition in CKD patients. Studies do not show that any one test is superior to another.

**Fair Imperative**
CKD: Assess Biochemical Parameters

- Glycemic control
- Protein-energy malnutrition
- Inflammation
- Kidney function
- Mineral and bone disorders
- Anemia
- Dyslipidemia
- Electrolyte disorders
- Others as appropriate.

Consensus Imperative

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CKD: Assess CKD-Mineral and Bone Disorders

RD should assess measurements of mineral and bone disorders (MBD) in adults with CKD, including post kidney transplant, for prevention and treatment.

Adults with CKD have altered mineral-bone metabolism and increased risk of vascular disease.

Consensus Imperative

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CKD: Assessment of Medical/Health History

RD should assess the medical and health history of adults with CKD, including post kidney transplant, for presence of other disease states and conditions, such as

- diabetes,
- hypertension,
- obesity and
- disorders of lipid metabolism

Adults with CKD, including post kidney transplant, have a higher prevalence of comorbidities – risk factors for progression of kidney disease.

Strong Imperative

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Chronic Kidney Disease

Nutrition Intervention

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**CKD: Protein Intake for eGFR**

For adults with CKD w/o DM, not on dialysis, eGFR <50ml/min/1.73m²,
RD should recommend or Rx a protein-controlled diet
0.6 - 0.8 g dietary pro / kg BW / day.
Clinical judgment needed re lower protein intakes,
- client’s level of motivation,
- willingness to participate in frequent follow-up and
- risk for protein-energy malnutrition.
Research reports that protein-restricted diets
(0.7g dietary pro / kg BW / day, ensuring adequate caloric intake) can slow GFR decline and maintain stable nutrition status in adult non-diabetic patients with CKD.

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**CKD: Very-Low Protein Intake for eGFR**

In international settings where keto acid analogs are available, very low protein-controlled diet may be considered.

For adults with CKD w/o DM, not on dialysis, eGFR <20 ml/min/1.73m², a very-low protein-controlled diet of 0.3 - 0.5 g dietary pro/kg BW/day with addition of keto acid analogs to meet protein requirements may be recommended.

International studies report that additional keto acid analogs and vitamin or mineral supplements are needed to maintain adequate nutrition status.

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**CKD: Protein Intake for Diabetic Nephropathy**

RD should recommend or Rx a protein-controlled diet pro
0.8 - 0.9 g pro / kg BW / day.
This level may result in hypoalbuminemia.
Research reports that protein-restricted diets improved microalbuminuria.

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**CKD: Protein Intake for Kidney Transplant**

- For adult kidney transplant recipients (after surgical recovery, with an adequately functioning allograft)
  - 0.8g to 1.0g per kg of body weight per day for protein intake, addressing specific issues as needed
  - Adequate, but not excessive, protein intake supports allograft survival and minimizes impact on comorbid conditions.

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**CKD: Energy Intake**

For adults with chronic kidney disease (CKD, including post kidney transplant after surgical recovery), the registered dietitian (RD) should recommend or prescribe an energy intake between 23kcal to 35kcal per kg of body weight per day, based on the following factors:

- Weight status and goals
- Age and gender
- Level of physical activity
- Metabolic stressors

Research reports that energy intakes between 23kcal to 35kcal per kg body weight per day are adequate to prevent signs of malnutrition.

*Fair*  
*Imperative*

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**CKD: Phosphorus**

For adults with chronic kidney disease (CKD Stages 3-5), the registered dietitian (RD) should:

- Recommend or prescribe a low-phosphorus diet providing 800mg to 1,000mg per day or 10mg to 12mg phosphorus per gram of protein. CKD patients have a predisposition for mineral and bone disorders.

- Phosphorus control is the cornerstone for the treatment and prevention of secondary hyperparathyroidism, renal bone disease and soft tissue calcification.

*Strong*  
*Conditional*

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**CKD: Adjust Phosphate Binders**

For adults with CKD (Stages Three to Five)

- Dose and timing of phosphate binders should be individually adjusted to the phosphate content of meals and snacks to achieve desired serum phosphorus levels.

- Serum phosphorus levels are difficult to control with dietary restrictions alone.

*Strong*  
*Conditional*

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**CKD: Phosphorus Management for Kidney Transplant**

For adult kidney transplant recipients exhibiting hypophosphatemia:

- The registered dietitian (RD) should recommend or prescribe a high-phosphorus intake (diet or supplements) to replete serum phosphorus as needed.

- Hypophosphatemia is common post kidney transplant.

*Consensus*  
*Conditional*
CKD: Calcium

For adults with chronic kidney disease (CKD Stages 3-5, including post kidney transplant), the registered dietitian (RD) should:

• Recommend a total elemental calcium intake (including dietary calcium, calcium supplementation and calcium-based phosphate binders) not exceeding 2,000mg per day.

• CKD patients have a predisposition for mineral and bone disorders. Serum calcium concentration is the most important factor regulating parathyroid hormone (PTH) secretion affecting bone integrity and soft tissue calcification.

Consensus
Conditional

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CKD: Iron Supplementation

In adults with chronic kidney disease (CKD, including post kidney transplant), the registered dietitian (RD) should:

• Recommend oral or IV iron administration if serum ferritin is below 100ng per ml and TSAT is below 20%.

• CKD patients have a predisposition for anemia.

• Sufficient iron should be recommended to maintain adequate levels of serum iron to support erythropoiesis.

Consensus
Conditional

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CKD: Vitamin B12 and Folic Acid for Anemia

In adults with CKD (including post kidney transplant), the RD should recommend:

• Vitamin B₁₂ and folic acid supplementation if the MCV is over 100ng per ml and serum levels of these nutrients are below normal values.

• CKD patients have a predisposition for anemia and all potential causes should be investigated.

Consensus
Conditional

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CKD: Vitamin C for Treatment of Anemia

If the use of vitamin C supplementation is proposed as a method to improve iron absorption for adults with CKD (including post kidney transplant) who are anemic, the RD should recommend the DRI for vitamin C.

There is insufficient evidence to recommend the use of vitamin C supplementation above the DRI in the management of anemia in patients with CKD, due to risk of hyperoxalosis.

Consensus
Conditional

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CKD: L-Carnitine for Treatment of Anemia

For adults with CKD (including post kidney transplant) who are anemic, the RD should not recommend L-carnitine supplementation.

There is insufficient evidence to recommend the use of L-carnitine in the management of anemia in adults with CKD including post kidney transplant.

Consensus
Conditional

CKD: Management of Hyperglycemia in Diabetes and CKD

For adults with diabetes and chronic kidney disease (CKD, including post kidney transplant), the registered dietitian (RD) should:

• Implement medical nutrition therapy (MNT) for diabetes care to manage hyperglycemia to achieve a target A1C of approximately 7%.

• Intensive treatment of hyperglycemia, while avoiding hypoglycemia, prevents diabetic kidney disease (DKD) and may slow progression of established kidney disease.

Strong
Conditional

CKD: Multi-Faceted Approach to Intervention in Diabetes and CKD

For adults with diabetes and chronic kidney disease (CKD, including post kidney transplant), the registered dietitian (RD) should:

• Implement Medical Nutrition Therapy (MNT) using a multi-faceted approach, including education and counseling in healthy behaviors, treatment to reduce risk factors and self-management strategies.

• Multiple risk factors are managed concurrently in adults with diabetes and CKD and the incremental effects of treating each of these risk factors results in substantial clinical benefits.

Consensus
Conditional

CKD: Multi-Faceted Approach to Intervention in Dyslipidemias and CKD

For adults with dyslipidemia and chronic kidney disease (CKD, including post kidney transplant), the registered dietitian (RD) should:

• Implement medical nutrition therapy (MNT), using a multi-faceted approach, including education and counseling in therapeutic lifestyle changes (TLC), treatment to reduce risk factors and self-management strategies.

• Multiple risk factors are managed concurrently in adults with dyslipidemia and CKD and the incremental effects of treating each of these risk factors results in substantial clinical benefits.

Fair
Conditional
**CKD: Education on Self-Management Behaviors**

For individuals with chronic kidney disease (CKD, including post kidney transplant), the registered dietitian (RD) should:

- Provide education and counseling regarding self-management behaviors.

- Therapy must take into consideration the patient’s perception of the health-care provider’s advice and prescriptions, factors that may influence self-management behaviors and the likelihood that the patient will adhere to recommendations.

*Fair Imperative*

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**CKD: Control Sodium Intake in CKD**

For adults with chronic kidney disease (CKD) including post-kidney transplant, the Registered Dietitian (RD) should recommend/prescribe a sodium intake of less than 2.4g (Stages 1-5) with adjustments based on the following:

- Blood pressure
- Medications
- Kidney function
- Hydration status
- Acidosis
- Glycemic control
- Catabolism
- Gastrointestinal issues, including vomiting, diarrhea and constipation

*Fair Imperative*

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**CKD: Control Sodium Intake in CKD**

Dietary and other therapeutic lifestyle modifications are recommended as part of a comprehensive strategy to reduce cardiovascular disease risk in adults with CKD.

*Fair Imperative*

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**CKD: Fish Oil/Omega-3 Fatty Acids**

If the use of fish oil or omega-3 fatty acid supplementation is proposed as a method to improve renal function, the registered dietitian (RD) should:

- Advise on the conflicting evidence regarding effectiveness in IGA Nephropathy

- Insufficient evidence to support fish oil therapy to improve renal function and patient or graft survival for kidney transplant

- Benefit of fish oil supplementation in reducing oxidative stress and improving lipid profile in adults with chronic kidney disease (CKD, including post kidney transplant).

*Fair Conditional*

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CKD: Physical Activity

If not contraindicated, the registered dietitian (RD) should:

- Encourage adults with chronic kidney disease (CKD, including post kidney transplant), to increase frequency or duration of physical activity as tolerated.
- Studies report that physical activity may minimize the catabolic effects of protein restriction and improve quality of life.

Fair
Conditional

CKD: Coordination of Care

For adults with chronic kidney disease (CKD, including post kidney transplant), the Registered Dietitian (RD) should implement Medical Nutrition Therapy (MNT) and coordinate care with an interdisciplinary team, through:

- Requesting appropriate data (biochemical and other)
- Communicating with referring provider
- Indicating specific areas of concern or needed reinforcement.

This approach is necessary to effectively integrate MNT into overall management for patients with CKD

Consensus
Imperative

CKD: Multivitamin Supplementation

In adults with chronic kidney disease (CKD, including post-kidney transplant), with no known nutrient deficiency (biochemical or physical) and who may be at higher nutritional risk due to poor dietary intake and decreasing GFR, the registered dietitian (RD) should:

- Recommend or prescribe a multivitamin preparation. Sufficient vitamin supplementation should be recommended to maintain indices of adequate nutritional status

Consensus
Conditional

CKD: Control Potassium Intake in CKD

For adults with chronic kidney disease (CKD), including post kidney transplant who exhibit hyperkalemia, the registered dietitian (RD) should:

- recommend or prescribe a potassium intake of less than 2.4g (Stages 1-3), with adjustments based on the following:
  - Serum potassium level
  - Blood pressure
  - Medications
  - Kidney function
  - Hydration status
  - Acidosis

Consensus
Conditional
CKD: Control Potassium Intake

in CKD

- Glycemic control
- Catabolism
- Gastrointestinal (GI) issues, including vomiting, diarrhea, constipation and GI bleed.

Dietary and other therapeutic lifestyle modifications are recommended as part of a comprehensive strategy to reduce cardiovascular disease risk in adults with CKD.

The degree of hypokalemia or hyperkalemia can have a direct effect on cardiac function, with potential for cardiac arrhythmia and sudden death.

CKD: Monitor and Evaluate

Biochemical Parameters

The registered dietitian (RD) should monitor and evaluate various biochemical parameters in adults with chronic kidney disease (CKD, including post-kidney transplant), related to:

- Glycemic control
- Protein-energy malnutrition
- Inflammation
- Kidney function
- Mineral and bone disorders
- Anemia

Consensus

Imperative

CKD: Monitor and Evaluate

Biochemical Parameters

- Dyslipidemia
- Electrolyte disorders
- Others as appropriate

For list of biochemical parameters, click here. Monitoring and evaluation of the above factors is needed to determine the effectiveness of Medical Nutrition Therapy (MNT) in adults with CKD and post kidney transplant.

Consensus

Imperative
CKD: Monitor and Evaluate Adherence to Nutrition and Lifestyle Recommendations

The registered dietitian (RD) should monitor the following in adults with chronic kidney disease (CKD, including post kidney transplant):

- Food and nutrient intake (e.g., diet history, diet experience and intake of macronutrients and micronutrients, such as energy, protein, sodium, potassium, calcium, phosphorus and others, as appropriate)
- Medication (prescription and over-the-counter), dietary supplements (vitamin, minerals, protein, etc.), herbal or botanical supplement use
- Knowledge, beliefs or attitudes (e.g., readiness to change nutrition and lifestyle behaviors)
- Behavior
- Factors affecting access to food and food- and nutrition-related supplies (e.g., safe food and meal availability).

Monitoring and evaluation of the above factors is needed to determine the effectiveness of Medical Nutrition Therapy (MNT) in adults with CKD and post kidney transplant.

CKD: Algorithms

Algorithms are available online: [www.and evidencelibrary.com](http://www.and evidencelibrary.com)

Evidence Based Guidelines > Guideline List > Chronic Kidney Disease > Algorithms

The following algorithms are available:

- CKD Nutrition Assessment
- CKD Nutrition Diagnosis
- CKD Nutrition Intervention
- CKD Nutrition Monitoring and Evaluation
CKD Algorithm (online)

- Follows the Nutrition Care Process (NCP)
  - ✔ Assessment
  - ✔ Diagnosis
  - ✔ Intervention
  - ✔ Monitor/Evaluation

Blue shaded items Link to Guideline Recommendation Pages (online)

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- Evidence-based Nutrition Practice Guidelines are intended to serve as a synthesis of the best evidence available to inform registered dietitians as they individualize nutrition care for their clients. Guidelines are provided with the express understanding that they do not establish or specify particular standards of care, whether legal, medical or other.

- Evidence-based Nutrition Practice Guidelines are intended to summarize best available research as a decision tool for A.N.D. members.

Citation

CKD Toolkit Development

- CKD Guideline is published on the EAL
- CKD workgroup members are recruited to be toolkit authors
- Determine Standardized Language Terms associated with CKD Recommendations
- Work from Standardized toolkit templates
- Conduct 60-day Usability Test of toolkit and revise
- Make toolkits available for purchase

Initial Progress Note—Long Form

CKD Assessment

- ADIME Format
- Standardized Language terms
  - International Nutrition and Dietetics Reference Manual

Initial Progress Note—Short Form

CKD Intervention

- Food and/or Nutrient Related History
- Nutrition Education
- Nutrition Counseling
- Coordination of Care

- "Snapshot" for other professionals
  - Most valuable information is pulled from the long form
More Features of the CKD Toolkit

Set of companion documents for application of the practice guideline

Overview of CKD, including a list of resources

Other Documents Include:
- Follow-up documentation forms
- Outcomes monitoring sheets
- Client education resources
- Case studies
- MNT protocol for treatment of CKD

Incorporate Nutrition Care Process and Standardized Language as the standard for care

Electronic downloadable purchase item- available on the EAL Store!
- andevidencelibrary.com

For additional information:

Academy Evidence Analysis Library®
www.andevidencelibrary.com

Resources for Information

• National Kidney Foundation (NKF) Kidney Disease Outcomes Quality Initiative (KDOQI)
  www.kidney.org
  • Clinical Guideline for Nutrition in Chronic Kidney Disease, 2000
  • Pocket Guide to Nutrition Assessment of the Patient with Chronic Kidney Disease, 4th edition, 2009
  • Clinical Guideline for Diabetes and Chronic Kidney Disease, 2007 (update to be released spring/summer 2012)

• Academy of Nutrition and Dietetics (formerly American Dietetic Association)
  • Chronic Kidney Disease Evidence-Based Nutrition Practice Guidelines, 2010
    www.andevidencelibrary.com
  • Byham-Gray, L and K Weisen; A Clinical Guide to Nutrition Care in Kidney Disease, 2004 (update available summer/fall 2012)
    www.eatrigh.org/store
  • Franz, MJ, J Boucher and R Franzini Pereira; Lipid Disorders, Hypertension, Diabetes, and Weight Management, 2011
    www.eatrigh.org/store
Thank you

Questions ?