

Qual è il ruolo della dieta ipoproteica nella terapia conservativa dell'insufficienza renale cronica?



**Linee Guida
a confronto**

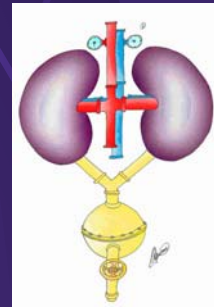
Dietista Franca Pasticci

Nonostante gli sforzi compiuti per la stesura delle Linee Guida, ben poco è stato fatto per incoraggiare il loro impiego. *Locatelli 2000*

- **PLAN:** valutazione dei sistemi in uso e verifica se attengono alle linee guida. Quindi modifica della pratica in direzione di un miglioramento dei risultati.
- **DO:** impiego pratico delle Linee guida
- **STUDY:** i risultati clinici derivanti dalla nuova pratica vengono misurati per verificare se hanno prodotto un miglioramento.
- **ACT:** in base ai risultati si effettuano le necessarie rifiniture. **Kliger 1999**

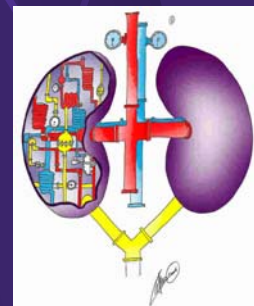
La dieta in conservativa

- L'anoressia è uno dei sintomi comuni
- i pazienti sono a rischio di malnutrizione
- sono presenti complicanze metaboliche



Scopi della dieta

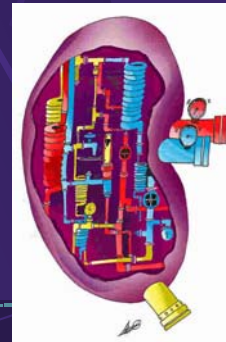
- Limitare la produzione dei prodotti di scarto
- prevenire le complicanze metaboliche
- mantenere lo stato nutrizionale
- ritardare la progressione



Pro-contro

Low protein diet in the conservative management of renal patients: NKF/DOQI say YES, what do you say?

- **G.Hartley**
- **A.M. Sowerbutts**



Energia



- **Occorre definire le richieste energetiche per: promuovere un peso ideale/prevenire la malnutrizione.**
- **Adeguate apporto energetico = bilancio azotato positivo. !!! se l'intake proteico è ristretto.**
- **Richieste energetiche simili a quelle della popolazione generale.**
- **La dieta con 35 kcal/kg/die mantiene l'albumina e gli indici antropometrici.**
- **Individui sedentari / > 60 anni - 30 kcal/kg/die.**
- **Precoce intervento e regolare counseling dietetico.**



The recommended DEI for individuals with chronic renal failure (CRF; GRF <25 mL/min) who are not undergoing maintenance dialysis is 35 kcal/kg/d for those who are younger than 60 years old and 30-35 kcal/kg/d for individuals who are 60 years of age or older (*Evidence and Opinion*)



The dietitian/nutrition advisor will advise the pre-dialysis patients on an appropriate energy intake of 35 kcal/kg IBW/day. Reduced intakes (30-35 kcal/kg IBW/day) may be appropriate in the elderly and/or with reduced activity (*Evidence and Agreed best practice*)



Energy requirements in CRF can be calculated in the normal, standardised way. In the absence of contraindications such as malnutrition, the principles of healthy eating regarding macronutrients, fibre and sodium should be promoted and the advice calorie intake should help to achieve ideal body weight.



Kilocalories – individualized to maintain reasonable weight; use basal energy expenditure X activity factor (1,2-1,3) + stress factor; or use 35 kcal/kg IBW or adjusted weight.

Proteine



- In corso di IRC sono evidenti anomalie del metabolismo proteico ed aminoacidico, per esempio: acidosi metabolica, iperparatiroidismo, resistenza all'effetto anabolico dell'insulina.
- Altri stress metabolici sono in relazione a malattie comorbide come diabete, infezioni.
- Spesso si assiste alla riduzione spontanea dell'apporto proteico.
- Diversi studi indicano che la riduzione delle proteine alimentari riduce la progressione della IRC



For individuals with CRF (GFR<30mL/min) the institution of a planned low-protein diet providing 0,60 g protein/kg/d should be considered. For individuals who will not accept such a diet or who are unable to maintain adequate DEI, an intake of up to 0,75 g protein/kg/d may be prescribed. **At least 60% of HBV (Evidence and Opinion)**



The dietitian/nutrition advisor will educate the pre-dialysis patient on an appropriate dietary protein intake of 0,6-1,0 g/kg IBW/day if < 0,8. At least 55% of HBV (Evidence % Agreed best practice)



The dietitian educates the patient on the necessity of meeting protein requirement and on appropriate sources of protein in order to supply the correct balance of amino acids without exacerbating hyperlipidaemia or hyperphosphatemia. 0,6-1 g/kg

At least 60% of protein intake should be comprised from foods of HBV.



**Protein - based on creatinine clearance, GFR, urinary protein losses
0,6 to 1 g/kg/IBW or adjusted weight.**

50% from HBV proteins

fats for lipid abnormalities: fats, cholesterol and CHO adjusted per severity of risk factor

Fosforo



600-1000 mg/day (19-31 mmol/day)



individualized (8-12 mg/kg/IBW)



0,3-0,55 mmol/kg/day



N/D



Potassio



2000-2500 mg/d (1mmol/kg/IBW)



individualized per lab values



< 1 mmol/kg/d



N/D



Liquidi



Reduced if oedematous or medically indicated



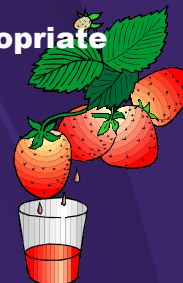
As desired to maintain appropriate hydration status



N/D



N/D



Sodio



1800-2500 mg/day -
individually managed



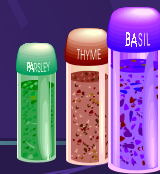
Individualized or 1-3g/day



80-100 mmol/day - individually
managed



N/D



Vitamine e sali minerali

Rimane argomento di dibattito.

!! alla riduzione degli intake

!! alla interazione con la terapia

vitamina D



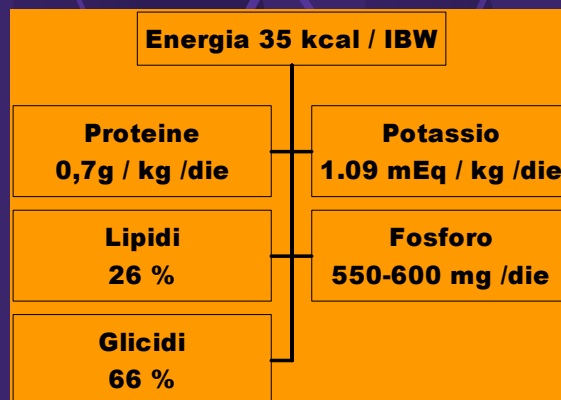


Composizione della dieta per pazienti con IRC (CrCl<60ml/min)

- proteine** 0,7 g/kg/IBW - **75% HBV**
- glucidi** 60% delle calorie (zuccheri complessi, alimenti a basso indice glicemico)
- lipidi** 30% delle calorie totali (acidi grassi polinsaturi:saturi > 1,2; col 300-350 mg/die)
- calorie** > 35 Kcal/kg peso ideale /die
- potassio** introito libero per VFG > 10 ml/min
- sodio** 2-4 g/die



Dieta con proteine complementari

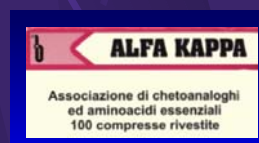




Dieta vegetariana supplementata

Raccomandazione (C)
rischio malnutrizione

proteine	0,3 g/kg/IBW
calorie	35/kg/IBW
fosforo	300-400 mg/die
potassio	1 mEq/kg/die
sodio	0.15 mEq/kg/die
cheto-analoghi	



Sindrome nefrosica

Raccomandazione B

proteine	0,7-0,8 g/kg + 1 g/grammo proteine urinarie; consigliato uso della soia
calorie	mantenimento IBW
carboidrati	60% calorie totali; complessi 45-50%
lipidi	25-28% calorie totali; ac. grassi saturi 4-5%; moninsaturi 10-12%; polinsaturi 8-10%
colesterolo	< 50-100 mg/die
fibra	30-40 g/die
sodio	800-900 mg/die



Panels of Nutritional Measures for Nondialyzed Patients

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For individuals with CRF (GFR <20 mL/min) protein-energy nutritional status should be evaluated by **serial measurements of a panel of markers** including at least one value from each of the following clusters: (1) **serum albumin**; (2) **edema-free actual body weight, percent standard (NHANES II) body weight, or subjective global assessment (SGA)**; and (3) **normalized protein nitrogen appearance (nPNA) or dietary interviews and diaries**.

(Evidence and Opinion)

Appendix IV. Role of the renal dietitian



Implementation of many of the guidelines concerning nutritional assessment (anthropometry, subjective global assessment, dietary interviews and diaries, and integration of the results of nutritional measurements) **and nutritional therapy** (developing a plan for nutritional management, counseling the patient and his/her family on appropriate dietary protein and energy intake, monitoring nutrient intake, educational activities, and encouragement to maximize dietary compliance) **is best performed by an individual who is trained and experienced in these tasks. Although occasionally a physician, nurse, or other individual may possess the expertise and time to conduct such activities, a registered dietitian, trained and experienced in renal nutrition, usually is best qualified to carry out these tasks.**

Appendix IV. Role of the renal dietitian



Here appears to be a general sense among renal dietitians, based on experience, that **an individual dietitian should be responsible for the care of approximately 100 MD patients** but almost certainly **no more than 150 patients** to provide adequate nutritional services to these individuals. Because, in many dialysis facilities, the responsibilities of the renal dietitian are expanded beyond the basic care described in these guidelines (eg, monitoring protocols and continuous quality improvement), these facilities should consider a higher ratio of dietitians to patients.

Summary of nutritional care

Encounter	Length of contact	Intervals between encounter
Initial	60-90 minutes	within 1 months of referral
Follow-up	30-45 minutes	3-4 weeks or as necessary
Nutritional update	45-60 minutes	quarterly

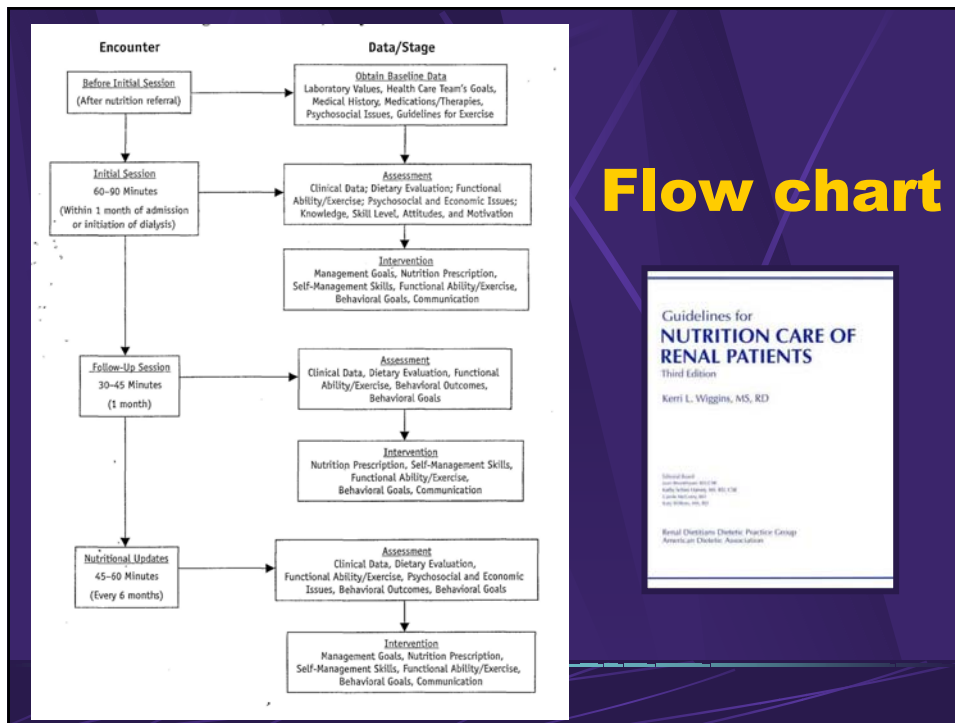
Guidelines for NUTRITION CARE OF RENAL PATIENTS

Third Edition

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Conclusioni

Un aspetto importante delle Linee Guida è che sottolineano le aree di incertezza scientifica in maniera esplicita.

In queste aree di incertezza le decisioni del medico dettate dall'esperienza e dalla "sua saggezza clinica" sono insostituibili.

Prof. C. Ponticelli