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# Ethnic Foods and PD Patients: what to be aware of?

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# Background:

## ➤ Personal background:

- Grew up in Malaysia (early exposure to 3 different cultures)
- Traveled to over 50 countries
- Renal dietitian in Vancouver for 10 yrs

## ➤ Presentation background:

### - Focus will be on:

- \* Understanding the role of culture in food preferences
  - \* Recognizing challenges integrating some ethnic foods in the PD diet
  - \* Learning practical strategies to support consumption of healthy foods that are culturally acceptable to our patients.
- Unique feature of this talk: interviewed RDs from various cultural backgrounds

# Learning to cook while traveling



“Berber Omelete” at the edge of Sahara Desert in Morocco



“Cactus” in Oaxaca, Mexico



“Pizza” on lava bed in Hawaii

# “Grocery shopping” while traveling



Fresh Dates orchard in Tunisia



Bargaining for Red Bananas  
in Tanzania



Fresh fruit on the street in Barbados

# Statistics Canada 2006 Census Data

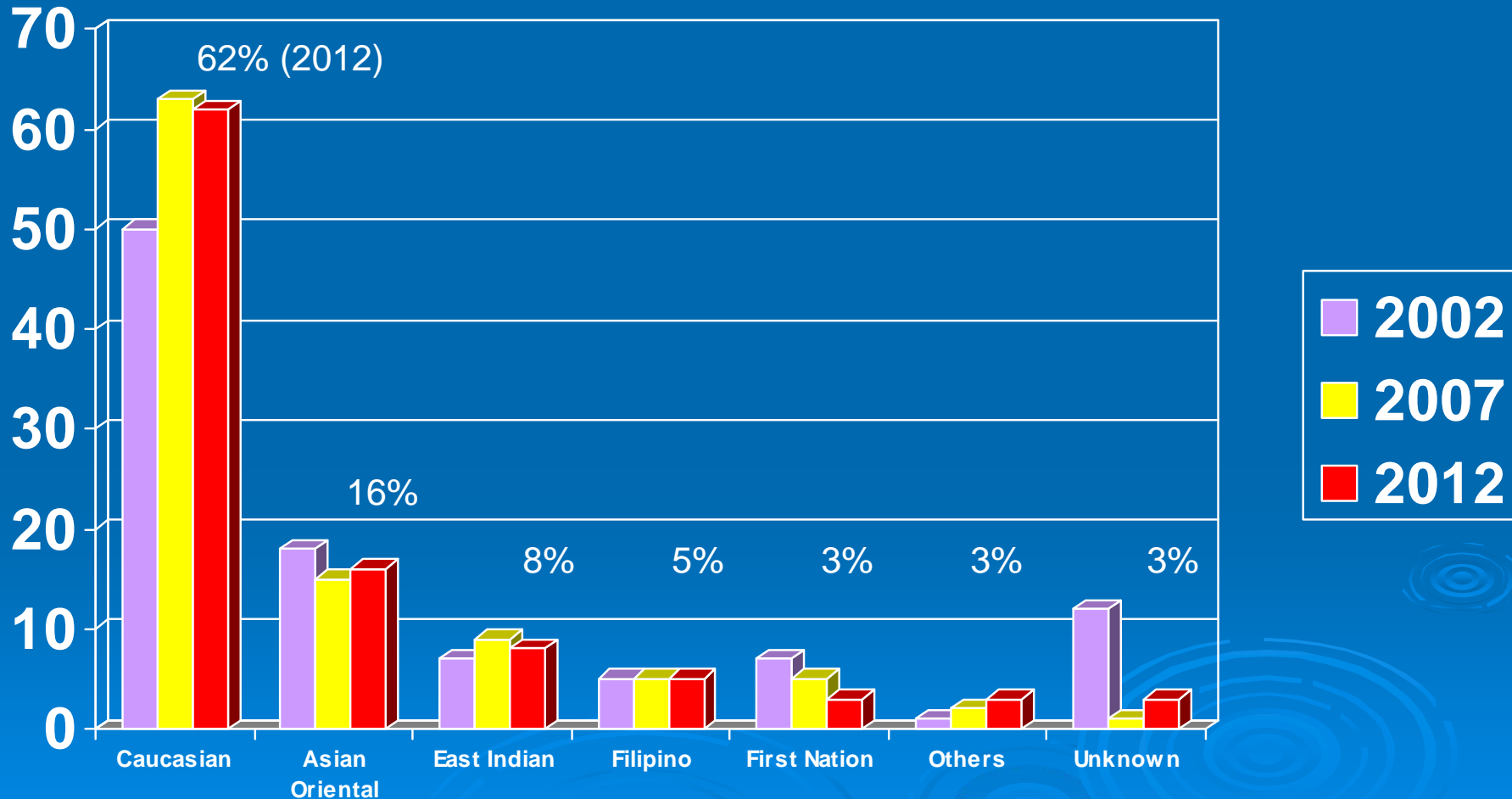
- 200 different ethnic origins reported
- ~16.2% total population is of visible minority
- Projects by 2031, 28% of Canadian population will be foreign-born
- Substantial increase in Chinese, Filipino and South Asian immigration

# Demographics in BC & Yukon PD and All Dialysis

	PD Patients			All Dialysis Patients		
	2002	2007	2012	2002	2007	2012
<b># Patients</b>	591 (28.8%)	704 (27.3%)	841 (27.4 %)	2050 (100%)	2578 (100%)	3071 (100%)
<b>Age</b>						
<b>Mean ± SD</b>	57 ± 16	61 ± 16	63 ± 15	61 ± 16	64 ± 16	66 ± 15
<b>Median [IQR]</b>	58 [47-70]	64 [50-74]	65 [54-75]	63 [50-74]	66 [54-76]	68 [56-77]
<b>Male</b>	56%	56%	61%	59%	59%	60%

Source: BC Patient Records & Outcome Management Information System (PROMIS) database

# Ethnic groups of PD patients in BC (% consistent with "All Dialysis")



Source: BC PROMIS database

# Ethnicity, Culture, and Relationship of Culture with Food and Disease

- Ethnicity often refers to “as a common ancestry, nationality, social customs and religion”.
- One of the ways ethnic groups maintain their cultural identities is through food practices, values and beliefs.
- Culture determines how a person defines health, recognizes illness, and seeks treatment.



# Culture and Food

- Food and language are the cultural habits human learn first – therefore greatest reluctance to change.
- Even where social attitudes become homogenized, cultural food practices tend to maintain their ethnic features.
- Are traditional cultural foods healthful, or at least compatible with modern dietary goals?
- Goal is to support patients in maintaining their cultural food practices as much as possible.

# Cultural Competence

- Means recognizing and forming one's attitudes, beliefs, skills, values, and level of awareness to provide culturally appropriate, respectful, and relevant care and education (Campinha-Bocate Model)
- Complex integration of:
  - Attitudes (open-minded, value diversity),
  - Knowledge (understanding the language, culture, behaviours) and
  - Skills

to enhance cross-cultural interactions, to work effectively with and to make appropriate recommendations for individuals from different backgrounds.

# Cultural Competence

- Cultural competence exists on a continuum from incompetence to proficiency
  - Developing awareness
  - Acquiring knowledge and
  - Developing and maintaining cross-cultural skills

(Requires long-term commitment of active learning and practicing).
- Culturally competent health care fosters:
  - favourable clinical outcomes results
  - positive and rewarding interpersonal experiences,
  - promotes patient/client satisfaction

# PD Diet Requirements:

Nutrient	Amount
<b>Protein</b>	Emphasize High Biological Value (HBV) Protein Stable state: 1.2-1.3 g/kg (e.g.: 70 kg: 7-8 oz + 1 glass dairy) Peritonitis: 1.5 g/kg
<b>Sodium (Na<sup>+</sup>)</b>	< 2300 mg/d
<b>Potassium (K<sup>+</sup>)</b>	Typically 3000-4000 mg/d
<b>Phosphorus (PO<sub>4</sub><sup>2-</sup>)</b>	800-1200 mg/d
<b>Fluid</b>	Typically 6-8 glasses/d

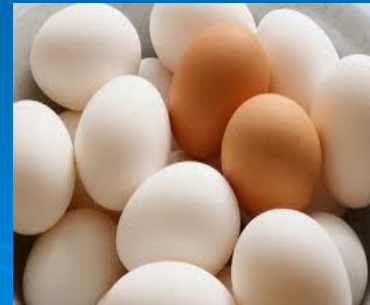
# Chinese (Protein)

## Less Often:

Organ meats, bone marrow, sardines, dried shrimps

## Better Choices:

Lean meats, poultry, fish, eggs



# Chinese (Vegetarian Protein)

## Soya Bean Products (High Phosphorus):

Tofu, Bean curds, Bean Curd Sheets, Tofu desserts



# Chinese (Noodles)

## Less Often:

Instant Noodles –  
800-2000mg Na<sup>+</sup>/packet!



## Better Choices:

Rice noodles, vermicelli -  
but check Na<sup>+</sup> content too.



# Chinese (Soups)

Soup base – Avoid using bones (phosphorus leaching into soups). Use meat or vegetables instead.



Bone-based soups  
(Higher phosphorus)



Vegetable / meat-based soup  
(Lower phosphorus)



# Chinese (Sauces & Spices)

## Less Often:

Oyster, Hoisin, Plum,  
Char-Siu sauces



## Better Choices:

Ginger, garlic, onion, chives,  
green onion, sesame oil,  
Chinese five spice



# Chinese (Beverages)

## Less Often:

Milo, Ovaltine, Horlick, Soya milk



## Better Choices:

Green tea, Lemon tea, Water with lemon/lime, Rice beverage



# Chinese (Beliefs)

- Yin/Yang (Cold/Hot) Foods

“Yin” (Cold) foods (e.g.: many fruits) avoided when sick – may be challenging to raise K level. May need to consider K-supplement.

- Post surgery – avoiding “toxic” foods such as some protein foods.

- Comfort food – Congee (rice porridge).





# Chinese

## Yang / Hot vs Yin / Cold



	Hot	Warm	Neutral	Cool	Cold
<b>Meat</b>	Lamb	Beef	Chicken Pigeon Pork	Duck	Crab Shrimp
<b>Vegetables</b>	Red chilli	Ginger Green pepper Onion	Carrot Cauliflower Yam	Broccoli Cabbage Celery	Mung bean Sprout Cucumber
<b>Fruits</b>	Lychee	Peach	Pineapple Grape	Apple Orange Pear Mango	Banana Watermelon
<b>Grains and nuts</b>	Sesame seed	Walnut Peanut Sunflower seed	Brown rice White rice	Almond Coconut Wheat flour	Mung bean

Source: Compiled from [6,9]

# Lunar/Chinese New Year Celebrated for 15 days



# Japanese ( Seasonal Eating)

- Japan's traditional culture often described as the seasonal culture.
- The sense of season is highly valued.
- Premium placed upon freshness and natural flavour.
- Eating food at their "Shun" or "Now-in Season" – believed to be good for health.
  - Spring: Bamboo shoots, tuna, herring
  - Early summer: Bonito (fish)
  - Autumn: Matsutake (a type of mushroom), chestnuts

# Japanese (“Japan-ized” and Trendy Foods)

- Japanese cuisine has also taken up many other culture’s foods  
e.g.: Japanese curry (block curry roux)  
Japandog (Japanese style hot dogs)
- Trendy foods promoted on TV/Media (e.g. mucousy seaweed)



# Japanese (Condiments)

- Wasabi  
(Japanese horseradish  
from wasabi root)



Tube, paste form –  
Salt may be added



Powder form  
(need to add  
water) – No salt

- Pickled Ginger



Pickled in salt,  
sugar & vinegar  
– usually don't  
eat much

30g = 275 mg  
Na<sup>+</sup>

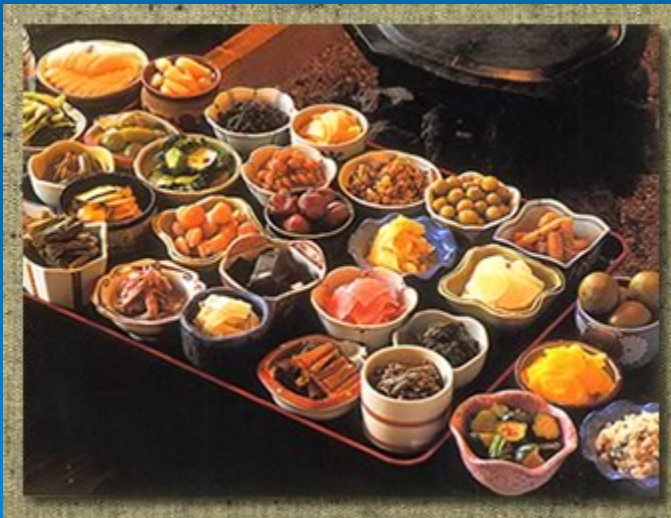


# Japanese (Soup & Rice Accompaniments)



## Miso Soup

- Dark brown miso paste  
~2000mg/tbsp
- Light brown miso paste  
tends to be lower in Na  
~1000mg/tbsp



## Tsukemono

(Pickled vegetables -salty)

# Japanese (Rice Accompaniments)



Furikake (Salty sprinkles on rice)-  
many contain Nori (seaweed)



Iriko/Chirimen-jako (Salt preserved/dried  
anchovies)



Fish roes - Tobiko, Kazunoko (herring roe), Mentaiko (cod roe) – all salt cured

# Japanese (Cooking)

- Uses quite a bit of sugar – e.g.: teriyaki & sukiyaki sauces, basically sugar & soya sauce (Watch if have diabetes).
- Sushi rice – has salt, sugar and vinegar. Therefore already quite salty even without soya sauce.

# Japanese (Sauces)

## Less Often: (Na mg/Tbsp)

Soya sauce (1029mg), Teriyaki (690mg),  
Sukiyaki (460mg), Ketchup (140 mg),  
Japanese Mayonnaise (~14mg but may  
contain MSG)



## Better Choices: (Na mg/Tbsp)

Low Sodium Soya Sauce (600mg),  
Ponzu (Mixture of lemon/lime and  
soy) (400 mg), Sesame oil

## Homemade sauces:

- Ponzu: 1:1 soy sauce & lemon or lime juice/ rice vinegar
- Soy & Balsamic: 1:1 or even 1:2



# Japanese (Vegetables)

(mg K / half cup 125 mL)

## Higher potassium



Burdock (Gobo)  
(225 mg K)



Fiddleheads  
(416 mg K raw)  
– must be  
cooked!



Chrysanthemum  
leaves (144 mg K)  
– medium K

# Japanese (Otsumami “Snack”)

- Like “tapas” - multiple dishes around dinner time. May then have rice/noodles at the end of night.
- Otsumami is usually accompanied by alcohol – beer mostly, but wine is gaining popularity.

## Note:

May need to consider phosphate binders for Otsumami!



# Korean

- Rice at every meal (including breakfast).
- Breakfast and lunch – little or no protein usually. Therefore, protein intake potentially low.



Typical Korean meal :

Rice, Panchan (pickled vegetables), meat / fish / seafood

# Korean (Panchan)

Pickled side dishes – high in salt.

e.g.: radish, lotus root, daikon, beans, fish, kimchi



**Kimchi** (Fermented cabbage)  
Even if homemade, still has salt



# Korean

- Fried fish with soya sauce

Tip: Cut soya sauce with water, sugar and vinegar



- Instant Coffee – very popular

3 in 1: Coffee, sugar and coffee whitener

Maxim Coffee Mix 50 Sticks



# East Indian

- Depends on regions
- Vegetarians and non-vegetarians
- Celebrations:
  - Dewali (Festival of Lights)
  - Birthdays of Gurus  
(Can be multi-day celebrations involving eating)



# East Indian



Typical meal

Rice, roti/chapati, curry (meat, fish, dahl, vegetables)

# East Indian (Dairy)

- Heavy on dairy – phosphorus & fat potentially high



Paneer (Cottage Cheese) – 100g contains:  
18 g protein, 20 g fat, 138 mg phosphorus



Lassi (Sour Yogurt Drink)

# East Indian (Fried foods /Fats)



Samosas



Pakorras



Ghee  
(Clarified  
butter)



Prashad  
(religious  
offering) –  
may contain  
flour, sugar  
and ghee

# East Indian (Vegetarians: adding protein)

- For vegetarians, if low in protein intake, consider adding Protein Powder into:
  - Dough for roti, chapati, naan (Indian flatbreads)
  - Dahl (lentil curry), Chana masala (chickpea curry)



Roti & Chapati

Dahl and Chana masala

# Filipino

## ➤ Malay influence



Coconut milk (High K & Fat)

In 100g: K<sup>+</sup> 220 mg; Fat 21 g



Kare-Kare (High phosphorus & fat)

(Oxtail in peanut butter sauce)

# Filipino

## ➤ Chinese influence



Pancit

(Noodle dishes with meat, shrimp, vegetables)



Sinigang

(Tamarind  
soup / stew)



Lumpia

(Ground meat,  
usually pork,  
filled spring  
rolls)



# Filipino

- Spanish Influence: 80% of dishes
- Introduced tomatoes, garlic, sauteeing onions in oil.
- Baked goods & desserts – Pan de sal (rolls), leche flan (egg custard)



**Menudo**

(Stew of pork, sausages, potatoes, carrots in tomato sauce)



**Pan de sal**

(Rolls)



**Leche flan**

(Egg custard)

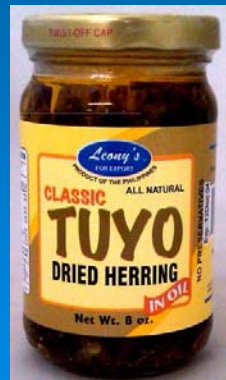
# Filipino (Sauces/Condiments/Spices)

## Less Often:

Fish sauce, shrimp paste, soya sauce, spaghetti sauce, pritong tuyo (salted herring)

## Better Choices:

Vinegar & chilli, garlic, onion, ginger, bay leaves, oregano, basil, calamansi



Calamansi

# Filipino (Snacks)



**Taho** (Sweet tofu pudding): phosphorus & sugar



## Cornicks

(Corn chips)

With garlic/onion & salt



**Halo-Halo** “Mix mix”  
Shaved ice with red beans, yam, corn, jackfruit, etc with evaporated milk / ice cream

# Filipino (Fruits Rich in Potassium) (mg K<sup>+</sup>/ half cup 125 mL)

Banana, mango, papaya, guava, jackfruit, durian, coconut, tamarind.



Papaya  
(390 mg)



Jackfruit  
(250mg)



Durian  
(530mg)



Tamarind  
(377mg)



**Big NO – Belimbing (Starfruit)**

# Filipino (Vegetables rich in Potassium) (mg K<sup>+</sup>/ half cup of 125 mL)

Spinach, kang-kong (water spinach), yam, sweet potato, cassava, bamboo shoots, okra, bitter melon



Kang-Kong  
(Water spinach)



Cassava  
(279 mg)



Bamboo shoots  
(320 mg)



Okra  
(187 mg)



Bitter melon  
(198 mg)

# Caution:

- Pitfall of “cultural sensitivity” – stereotyping.
- Do not assume “cultural food practices”.
- Seeking new food experiences: the more choices that we have, the more separated we are from our cultural roots.
- The rise of the new food culture.

# Melting pot vs Salad bowl?

- In the U.S.: “Melting Pot” vs “Salad Bowl”
  - Current U.S. population is more like a salad bowl than a melting pot.
  - Salad bowl contains many ingredients, blend together but each ingredient retains its unique taste and texture.
  - More politically correct than Melting pot – which suggests ethnic groups may be unable to preserve their cultures due to assimilation.
- In Canada: “Cultural Mosaic”; in Europe: “Multiculturalism (multikulti).”



# Chinese Renal Nutrition Patient Education Materials

- Partnership between Providence Health Care Renal Dietitians and the BC Provincial Renal Agency
- Developed 15 nutrition handouts in Chinese and English
- Featured in 2 articles in J Renal Nutrition
- Shared with 55 health care teams around the world upon requests
- If interested, contact: Jiak Chin Koh  
[jckoh@providencehealth.bc.ca](mailto:jckoh@providencehealth.bc.ca)



# Samples of Chinese Renal Nutrition Handouts (PHC/BCPRA)



## NUTRITION INFORMATION

### 營養訊息

## 低磷質飲食指南

腎功能衰竭時會減少磷的排泄，引致磷質積聚體內。血中磷太高時會造成皮膚及骨節方面的疾病。因此腎病人應限制從食物中吸取的磷，並應在餐前服用清除磷質的藥物。

您的清除磷質藥物是：

- 早餐前服用 \_\_\_\_\_ 粒  
 午餐前服用 \_\_\_\_\_ 粒  
 晚餐前服用 \_\_\_\_\_ 粒  
 小點前服用 \_\_\_\_\_ 粒

### 肉以及肉類代替品

避免含高磷質的食物

內臟(如肝、腸)、骨髓、熟狗、沙甸魚、蝦米、豆類 / 乾豆(如紅豆、黃豆)、花生醬

較好的選擇

瘦肉 (如牛肉、豬肉、火雞、雞肉)、魚、海鮮、蛋白、豆腐、腐竹

### 五穀類

避免含高磷質的食物

糙米、全麥麵包及餅乾、高纖維穀類早餐

較好的澱粉質食物選擇

白麵包、白米、粥、麵、米粉、意大利粉、烏冬、餅乾

## Low Phosphorus Diet

When your kidneys fail, phosphorus builds up in the body. High phosphorus level in the blood can result in itchy skin and bone problems. People with kidney problems should limit their intake of phosphorus and take phosphorus binders before meals to control the phosphorus level in their blood.

Your phosphorus binder is:

- Take \_\_\_\_\_ before breakfast  
 Take \_\_\_\_\_ before lunch  
 Take \_\_\_\_\_ before dinner  
 Take \_\_\_\_\_ before snack(s)

### Meat and Meat Alternatives

Avoid these foods that are high in phosphorus

Organ meats (liver, intestine), bone marrow, hotdogs, sardines, dried shrimps, beans and lentils (e.g. red beans, soy beans), peanut butter

Better meat and meat alternative choices

Lean meats (beef, pork, turkey, chicken), fish, seafood, egg whites, tofu, bean curd sheets

### Starches

Avoid these foods that are high in phosphorus

Brown rice, whole wheat bread and crackers, bran cereals

Better starch choices

White bread, white rice, congee, noodles, vermicelli, pasta, udon, cookies and crackers



## NUTRITION INFORMATION

### 營養訊息

## 食物購買表 給腎臟病患者

以下列表提供多類食物提議給沒有洗腎的腎臟病患者。

若您有糖尿病，減少食用糖，糖果和果汁。

如有食物不在表上，請向您的營養師查詢。

## Grocery List for Kidney Patients

This list provides shopping ideas for patients not on dialysis.

If you have diabetes, limit sweets, candies and juices.

Please check with your dietitian for information on any food that is not on this list.

### 肉類及蛋白質類食物

每日限制食用 \_\_\_\_\_ 盎司

- 魚 (新鮮，或凍結去骨的)
- 雞肉
- 火雞
- 豆腐
- 牛肉
- 豬肉
- 羊肉
- 小牛肉 (Veal)
- 鴨肉/鵝肉
- 雞蛋/雞蛋代替品
- 海鮮 (蝦、帶子等)
- 花生醬\* / 果仁\*
- 乾豆類\* / 小扁豆\*
- 芝士\*
- 牛奶\* / 煉乳\* / 馬家芝士\* 每日 \_\_\_\_\_ 杯

每日限制食

- 1安士 = ¼ 杯魚，肉，海鮮，凍凍豆腐
- 1安士 = ½ 杯軟豆腐，凍凍豆腐
- 1安士 = 2 湯匙花生醬
- 1安士 = 1 小片芝士
- 3安士 = 一沓牌牌的大小
- 1安士 = 30 克煮熟的肉的重重

\* 含磷

### Meat/Protein Foods

Limit to \_\_\_\_\_ ounces a day

- Fish (fresh or canned, no bones)
- Chicken
- Turkey
- Tofu
- Beef
- Pork
- Lamb
- Veal
- Duck, Goose
- Eggs, Egg substitutes
- Seafood (shrimp, scallop, etc.)
- Peanut butter\*, Nuts\*
- Legumes\*, Lentils\*
- Cheese\*
- Milk\*, Yogurt\*, Cottage cheese\* \_\_\_\_\_ cup a day

Portion Size

- 1 oz = ¼ cup fish, meat, seafood, firm tofu
- 1 oz = ½ cup soft tofu, ½ cup legumes
- 1 oz = 2 tbsp peanut butter
- 1 oz = 1 small slice cheese
- 3 oz = size of deck of cards
- 1 oz = 30 g cooked meat by weight

\* High Phosphorous

# Recipes/ Resources

NKF: List of cookbooks for kidney patients	<a href="http://www.kidney.org/professionals/crn/cookbooks.cfm">http://www.kidney.org/professionals/crn/cookbooks.cfm</a>
Davita	<a href="http://www.davita.com">www.davita.com</a>
Renal Support Network	<a href="http://www.rsnhope.org/recipes/">http://www.rsnhope.org/recipes/</a>

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