



透析病人高血磷護理指導（英文）

Hyperphosphatemia in Dialysis Patients Care Guide

「高血磷」是透析病人最常發生，也最容易忽略的問題。對病人雖然不會有立即性的危險，但長期累積卻是造成透析併發症的重要原因。研究顯示，血清中磷值大於 6.5 mg/dl 時，死亡增加 27%，發生冠心病的比率亦增加 52%，皆顯示高血磷會造成透析病人的罹病率及死亡率增高。

Hyperphosphatemia in dialysis patients is most common, and the most easily overlooked problem. Although the patient will not have immediate danger, long-term accumulation is a major cause of dialysis complications. Research shows, if serum phosphorus values greater than 6.5mg / dl, the deaths increased by 27%,rate of occurrence of coronary heart disease, also increased by 52%,It is displayed that hyperphosphatemia mortality in dialysis patients increased.

一、正常值：

Normal range:

病人已接受透析時，血鈣應維持 9.4~9.5 mg/dl，血磷可維持在 3.5~5.5 mg/dl，鈣磷乘積應小於 55 mg²/dl²。

Patients already receiving dialysis, calcium should be maintained 9.4-9.5mg / dl, phosphorus can be maintained at 3.5-5.5mg / dl, calcium-phosphate product should be less than 55mg² / dl².

二、高血磷的症狀：

Hyperphosphatemia symptoms:

皮膚癢、骨頭病變、骨折、副甲狀腺功能亢進；全身性軟組織鈣化導致心血管疾病，增加死亡率。

Pruritus. Bone lesions. Fracture.Deputy hyperthyroidism. Systemic soft tissue calcification leads to cardiovascular disease ,Increased mortality.

三、引起血磷過高常見的因素：

The common causing factor is high level of phosphorus:



1、吃過多高磷的食物（最主要原因），每日磷攝取量需控制在 800~1200 毫克內。

Daily phosphorus intake should be controlled in the 800-1200 mg range.

2、磷結合劑服用方式錯誤：如未與三餐同時服用或外出用餐忘記服用磷結合劑。

Phosphate binders administration errors: If patient does not take with meals while dining out or forgets to take phosphate binder.

3、透析時間不足。

Inadequate dialysis

4、續發性的副甲狀腺素亢進，（嚴重時需接受外科手術治療）。

Renewal of parathyroid hormone hyperthyroidism, they are subject to a severe need of surgery

四、預防高血磷的方法：

Hyperphosphatemia prevention methods:

1、儘量避免吃高磷食物。

Try to avoid eating foods high in phosphorus

2、磷結合劑的使用：

The use of phosphate binders:

目前台灣常見的磷結合劑為碳酸鈣（Calcium carbonate）或醋酸鈣（Calcium acetate），碳酸鈣一定要磨碎（粉）拌於食物中，因粉末與食物接觸面積大經由唾液咀嚼後降磷效果佳；若用醋酸鈣（Calcium acetate）及磷能解（Renagel）可於吃食物時整顆吞服，福斯利諾（Fosrenol）以粉末狀與食物同時進食，所有的磷結合劑不論正餐或點心宵夜都需服用，並依實務含磷量的多寡來調整劑量，例如這餐吃較多的高磷食物，可多增加一顆磷結合劑，下一餐吃的食物較少則減少一顆或半顆磷結合劑，如果磷值一直居高不下，則可短暫的給予含鋁的製劑。

At present, in Taiwan the common phosphorus binding agent is calcium

carbonate or calcium acetate. It is important to mix calcium agents with flour, because this creates a Dephosphorization effect. When taking Fosrenol, it is important to take with a meal or a snack. The amount taken with each meal should be based upon the amount of phosphorus in the food. For example, if a meal with high phosphorus, the next one should have a lesser amount. Also, if phospholipids have been high, it can give a short aluminum-containing formulation.

3、加強透析：

Strengthening dialysis:

可延長透析時間、增加透析次數或增加人工腎臟的膜面積，來達成移除血磷的目的。

Extend the duration of dialysis, increase the number of dialysis or increase artificial kidney membrane area, to achieve the purpose of removing phosphorus

五、高磷食物一覽表：

Daftar makanan fosfor tinggi:

	高磷食物 每100克食物含200~500毫克磷	超高磷食物 每100克食物含大於500毫克磷
穀物類	刀削麵、蕎麥、高纖米、燕麥	營養米、麥片、薏仁、糙米、養生麥粉、小麥胚芽
乾豆、種子及堅果類	凍豆腐、油豆腐、臭豆腐、干絲、豆腐皮、紅豆、綠豆、蠶豆、豆乾、杏仁果、花生、黃豆、開心果、山粉圓	黑豆、芝麻、乾蓮子、腰果、松子
肉及蛋類	雞肉、鴨肉、鴨賞、培根、香腸、洋火腿、臘腸、豬肉鬆、素肉鬆、豬肉乾、牛肉	豬肝、蛋黃、內臟類



	乾、各種蛋類、三明治火腿	
水產食品類	黃魚、虱目魚、蝦仁、明蝦、魚鬆、海蟹、河蟹、鮑魚、紫菜、蚵子乾、乾海帶	干貝、蝦米、蝦皮、(乾)烏魚子、小魚乾、柴魚片、魚脯、小卷(鹹)
奶類及其它	煉乳、乳酪、健素糖	酵母粉、各種奶類、羊乳片、所有高湯類、各種罐頭食物

	High phosphorus foods Per 100 grams of food containing 200-500 mg of phosphorus	Ultra-high-phosphorus foods Per 100 grams of food containing more than 500 milligrams of phosphorus
Cereals	Noodle. Buckwheat. High-fiber rice. oat	Nutritional rice, oatmeal, barley, brown rice, health flour, wheat germ
Dried beans seeds and nuts	Frozen tofu, fried tofu, tofu, Gansi, tofu skin, red beans, mung beans, broad beans, tofu, almonds, peanuts, soybeans, pistachio, mountain pink circle	Black beans, sesame seeds, dried lotus seeds, cashews, pine nuts
Meat and eggs	Chicken, duck, duck tours, bacon, sausage, ham, sausage, pork floss, floss prime, dry pork, beef jerky, a variety of	Liver, egg yolk, offal



	eggs, ham sandwiches	
Seafood	Fish, milkfish, shrimp, prawns, fish floss, crab, crab, abalone, seaweed, oyster sub-dry, dry seaweed	Scallops, shrimp, shrimp, mullet roe, dried fish, bonito flakes, small volume
Milk and other	Condensed milk, cheese, sugar and health factors	Yeast powder, all kinds of milk, goat milk tablets, all stock classes, all kinds of canned food

高血磷是透析病人最常發生的，也是最容易忽略的，透析病人對高磷飲食的控制和磷結合劑正確服用是影響血磷控制最重要的因素，護理人員應秉持愛心、耐心幫助病人有效達到血磷控制，以降低高血磷的合併症，使病人都有良好的生活品質。

Hyperphosphatemia in dialysis patients is the most common and also the most easily overlooked, dialysis patients to control high phosphorus diet and phosphate binders are administered properly affect the most important factor controlling phosphorus, nurses should uphold love, patience to help patients effectively achieve phosphorus control, to reduce hyperphosphatemia complications, the patient has a good quality of life

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