

Volume 14, Issue 7 — July 2019

Phosphorus

Inside this Issue

Did you know?

- Your blood phosphorus should be between **3.5mg/dL and 5.5mg/dL**
- High phosphorus in your blood (>5.5mg/dL) can lead to calcium being taken from your bones causing brittle bones and an increased risk of breaking a bone.
- High phosphorus in your blood can also lead to calcification (hardening) of vascular system (arteries and veins) and soft tissues (organs, muscles, skin). The calcifications can lead to heart attack, poor blood flow, leading to tissues dying, increased risk of infection, and possible amputations.
- You can help control your blood phosphorus by avoiding added phosphorus and limiting the amount of natural phosphorus you consume.
- Aim for 800-1000mg phosphorus from food/day

One meal of :3oz. ground beef taco meat (using phosphate free taco seasoning) (168mg), 2 tortillas (100mg), 1 oz cheddar cheese (145 mg), 1 cup 2% milk (226mg), 1 cup lettuce (10mg), 2Tbsp tomatoes (15mg), and ½ cup corn (47mg)= **711mg Phos.**

- There are 2 types of phosphorus: **NATURAL and ADDED**
- We absorb 100% of **ADDED PHOSPHORUS** in foods
ADDED PHOSPHORUS is used as preservatives, anticaking, and leavening in these products.
- We absorb ~60% of **NATURAL** phosphorus found in foods
- The only way to know if a food contains added phosphorus is to **READ THE INGREDIENT LIST** and look for the letters **“PHOS”** anywhere in the words listed if present avoid it.
- Making foods from scratch at home can help you avoid added phosphorus.

Kidney Info

Product Pages

Recipe

Social Worker's
Corner

Kidney Info

Birthdays

Unit Updates

Monthly Puzzle

Care Conference

Sign up in the
waiting room

The Dialysis Newsletter
is available online:

<https://www.mercycare.org/services/dialysis/newletters/>

or-

[g/services/dialysis/newletters/](https://www.mercycare.org/services/dialysis/newletters/)

There's *more* to The Mercy Touch[®].

Mercy Dialysis Product Pages

— *nutrition news you can use!*

DIETITIAN
RESEARCHED



Natural Phosphorus Content in Foods

Your body only absorbs about 60% of the natural phosphorus content listed.



Phosphorus is a mineral found in many foods. Research indicates limiting phosphorus intake will have a positive effect on bone disorders and cardiovascular health for patients with CKD. It is important to keep serum phosphorus within defined limits (3.5-5.5mg/dL). Keeping phosphorus intake between 800-1200mg/day. These tables include portion sizes and the natural phosphorus content. There are no added phosphorus ingredients in the foods listed. Use these lists to help you stay within the recommended daily limits of phosphorus (800-1,000mg/day) and maintain or improve your blood phosphorus in range.

Note: if you eat more than the serving listed you need to adjust the phosphorus content.

Example: eating 1/2 cup of pineapple has 6 mg of phosphorus if I eat 1 full cup of pineapple it has 12 mg of phosphorus in it.

Seafood (3-ounce portion; cooked)	Phosphorus Content
Oysters, Eastern	120 mg
Shrimp	120 mg
Snow crab	120 mg
Tuna, canned	130 mg
Mahi Mahi	155 mg
Lobster	160 mg
King crab	192 mg
Rockfish	195 mg
Yellowfin tuna	210 mg
Sea bass	210 mg
Salmon, Atlantic farmed	215 mg

Cheese (Plus Serving Size)	Phosphorus Content
Cream cheese, 2 tablespoons	20-40 mg
Neufchatel cheese, 1 ounce	39 mg
Parmesan cheese, grated, 2 tablespoons	72 mg
Cottage cheese, 1/4 cup	92 mg
Feta cheese, 1 ounce	96 mg
Blue cheese, 1 ounce	110 mg
Pasta or Rice (1/2 cup; cooked)	Phosphorus Content
Rice noodles	14-28 mg
Couscous	20 mg
Plain white rice, short, medium or long grain	35 mg
Macaroni	40 mg
Spaghetti	42 mg
Pearled barley	43 mg
Egg noodles	50-60 mg

Mercy Dialysis Product Pages

— *nutrition news you can use!*

Dairy, Dairy Substitutes and Egg Whites (1/2 cup portion)	Phosphorus Content
Egg whites (from 3 eggs)	15 mg
Sour cream, 2 tablespoons	20-40 mg
Unenriched rice milk (without calcium-phosphate)	29 mg
Sherbet	38 mg
Nondairy creamer without phosphate additives	40-53 mg
Almond milk, Almond Breeze®, original	50 mg

Meat or Poultry (3-ounce portion; cooked)	Phosphorus Content
Chicken thigh, skinless	150 mg
Beef, pot roast	155 mg
Hamburger patty, 90% lean	170 mg
Turkey thigh meat, skinless	170 mg
Lamb chop	185 mg
Turkey breast meat, skinless	185 mg
Chicken breast, skinless	190 mg
Pork roast	190 mg
Beef, sirloin steak	195 mg
Pork chop	200 mg
Veal chop	200 mg

Snack Food (Plus Serving Size)	Phosphorus Content
Fruit candies: hard, chews or gummy	0 mg
Applesauce, 1/2 cup	6 mg
Pineapple, fresh, 1/2 cup	6 mg
Unsalted popcorn, 1 cup	8 mg
Blueberries, 1/2 cup	9 mg
Radishes, 1	9 mg
Apple, 1 medium	10 mg
Celery, 1 stalk	10 mg
Peach, 1 medium	10 mg
Fig bar, 2 bars	10-25 mg
Cherries, 1/2 cup	15 mg
Fruit cocktail, 1/2 cup	17 mg
Strawberries, fresh, 1/2 cup	18 mg
Low-sodium crackers, 1 ounce	20-35 mg
Unsalted pretzels, 1 ounce	20-40 mg
Baby carrots, 9 pieces	25 mg

Happy

BIRTHDAY

Ken K. 7th	Janet M. 20th
Donna M. 8th	Ricky C. 22nd
Holly H. 11th	Lynn P. 27th
Kevin L. 11th	Stephen Y. 28th
Karen D. 14th	Kelly M. 30th
Bonnie B. 16th	Patrick J. 30th
Larry D. 17th	Liz O. 31st
Frank R. 18th	

Note: ALWAYS READ THE INGREDIENT LABEL TO AVOID ADDED PHOSPHORUS

PD BAXTER ROUTINE SUPPLIES DELIVERIES

*Just a reminder to help ensure the safety of the Baxter's Service Specialist when delivering your supplies to your home.

HOW SHOULD YOU PREPARE FOR YOUR DELIVERIES

-Restrain pets (if applicable)

-A clear path (no ice, snow, debris, etc.) from the street to the residence entrance.

-For safety purposes, Baxter's Service Specialist cannot remove his/her boots during the delivery process.

-Whenever possible locate product storage in a space that will permit Baxter Service Specialist to safely lift and move about without twisting, stooping or using an extended reach.

-Please arrange a travel path that will allow the use of the handcart.

-Floor, stairs, decks, porches and hand railing should be in good structural condition and should not have rotten or missing boards in the path of travel.

Thank-You!



Watermelon Refresher

Ingredients

- 1 cup crushed ice
- 1 cup cubed seedless watermelon
- 2 tsp. lime juice
- 1 Tbsp. sugar*
- Adjust sweetness as needed
- Garnish with watermelon cube, lime, lemon, and/or mint leaves

*Use your favorite sugar substitute for a lower carbohydrate treat



Directions

1. Blend all ingredients in a blender until blended to your desire
2. Pour into 2 small glasses
3. Garnish and ENJOY!

Makes 2 Servings

Nutrients for 1 serving

*using sugar substitute

Calories	52 /26* kcal
Fat	0 g
Carbohydrates	13/6* g
Protein	0 g
Sodium	1 mg
Potassium	96 mg
Phosphorus	9 mg
Calcium	6 mg

Phosphorus Food Sources

Natural Phosphorus Food Sources

(body absorbs ~60% of this type of phosphorus)

Beans (black, garbanzo, great northern, kidney, navy, lima, red, soy, white, pork and beans)
Dairy Products – milk, cheese, ice cream, yogurt, cream soups
Nuts, Seeds, Nut butters
Oatmeal
Wheat and Whole grain foods, especially “Bran” types
Meat, fish, pork, poultry, eggs
Chocolate

Added Phosphorus Food Sources (body absorbs 90% of this phosphorus)

Beverages:

Aquafina Essentials Beer	Hawaiian Punch Kool-	Nestea COOL
Crystal Light	Aide	Mountain Dew Code Red
Colas	Lemonade	Lipton Tea
Coffee creamer	Sunny D Tang	(in plastic bottles)
Fruitworks	V8 Smoothies	

Packaged Foods:

Meat products sold in the freezer section (chicken, breaded meats)
Frozen meals (some varieties)
Instant Rice & Instant Potatoes
Frozen waffles or pancakes & Syrups
Hot dogs, sausage, bacon
Packaged lunch meats
Salad Dressings (Ranch & other “creamy” varieties)

Mixes:

Biscuit, Waffle, or Pancake Mixes
Instant pudding
Jell-O
Sauce & gravy mixes
Processed dinner mixes (Hamburger Helper, Rice-a-Roni)

Seasonings:

Minced garlic in a jar

Phosphorus Detective

- Phosphoric Acid
- Sodium Polyphosphate
- Pyrophosphate
- Sodium Tripolyphosphate
- Polyphosphate
- Tricalcium Phosphate
- Hexametaphosphate
- Trisodium Phosphate
- Dicalcium Phosphate
- Sodium Phosphate
- Monocalcium Phosphate
- Tetrasodium Phosphate
- Aluminum Phosphate
- Ferric Phosphate



Did your Medicaid recently switch?

Effective July 1, 2019, Amerigroup Iowa and Iowa Total Care are the Managed Care Organizations (MCOs) serving the IA Health Link and Hawki programs.

All members in the IA Health Link and Hawki programs are in an Open Choice Period through September 30, 2019. Members may change their MCO for any reason during this time.

Questions?

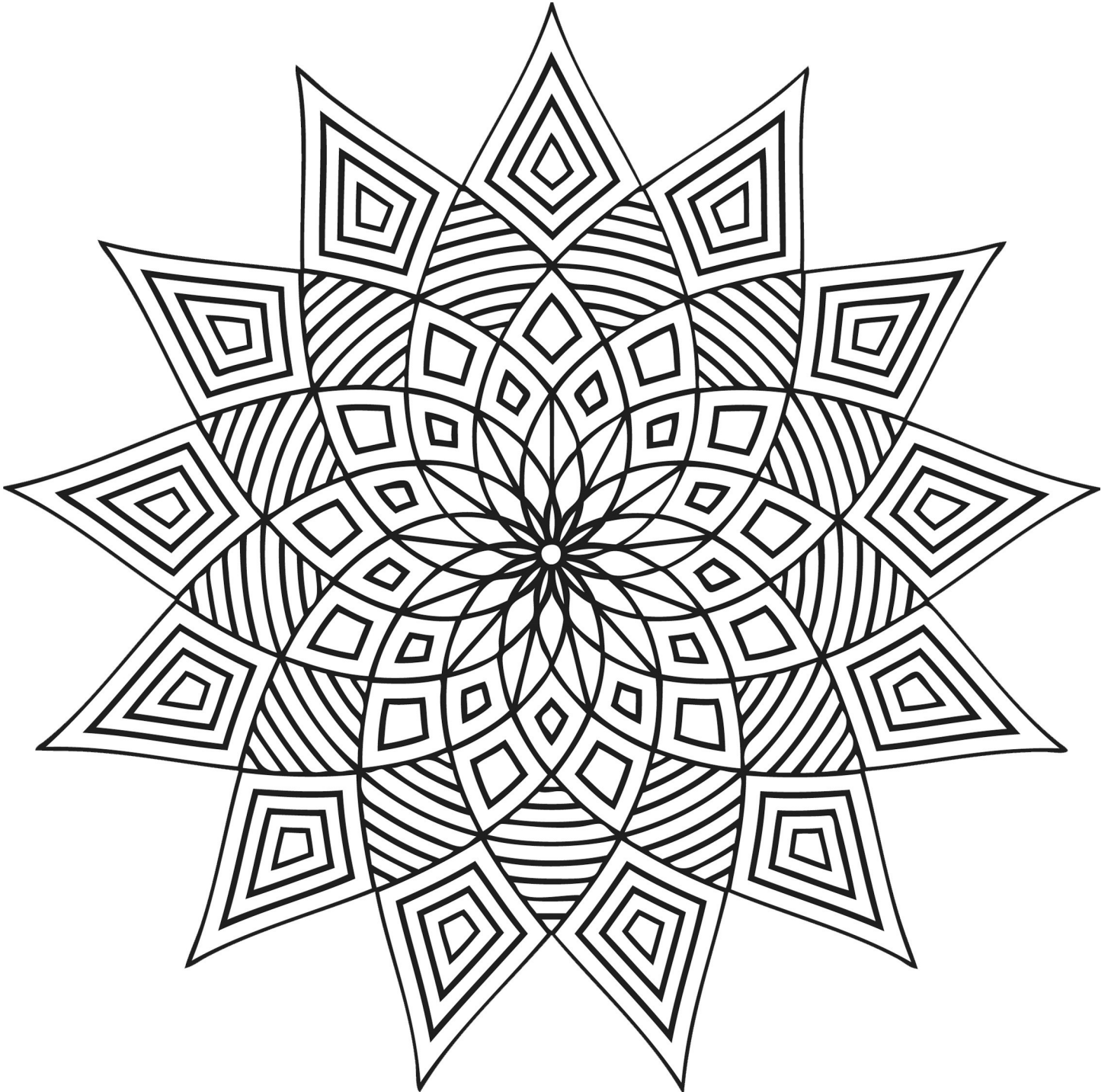
Contact DHS/your current Managed Care Organization for plan specific questions, to request a new card, change your address, etc.

Managed Care Organization	Member-Specific Contact Information
Amerigroup Iowa, Inc.	Email: MPSWeb@amerigroup.com Phone: 1-800-600-4441 Website: http://www.myamerigroup.com/IA Member Handbook
Iowa Total Care*	Phone: 1-833-404-1061 Website: www.iowatotalcare.com Member Handbook

Iowa Medicaid Member Services (Monday to Friday from 8 a.m. to 5 p.m.)
1-800-338-8366 (Toll Free)
515-256-4606 (Des Moines Area)
515-725-1351 (Fax)

For telephone accessibility assistance if you are deaf, hard-of-hearing, deaf-blind, or have difficulty speaking, call Relay Iowa TTY at 1-800-735-2942.

Stressed? Try coloring!



PD & Monthly Puzzle

ACCESS
 ACID
 ALBUMIN
 ANEMIA
 APPLE JUICE
 ARTERIAL
 AWARENESS
 BASE
 BLOOD PRESSURE
 BLOOD UREA NITROGEN
 CALCIUM
 CATHETER
 CERTIFICATION
 CKD
 CREATININE
 CRRT
 DIABETES
 DIALYSIS
 EDEMA
 EDUCATION
 ELECTROLYTES
 ESRD
 FILTER
 GRAFT
 HEART
 HEMODIALYSIS
 HYPERTENSION
 INFECTION
 INTERDISCIPLINARY
 KIDNEY
 LABORATORY
 LUNGS
 MILLIONS
 NEPHROLOGIST
 NEPHRON

S	V	Q	A	L	B	U	M	I	N	S	H	Z	R	T	K	M	D	T	D	L	K	X
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G	K	I	N	E	I	R	O	M	U	I	T	T	O	O	R	A	A	N	D	Q	O	R
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N	U	O	I	O	O	R	N	A	M	N	N	O	E	M	N	G	U	H	T	N	G	B
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B	E	E	S	I	K	E	I	N	O	H	S	B	V	C	W	W	U	W	V	B	R	E
V	O	U	R	P	L	S	R	M	N	R	R	I	P	O	T	A	S	S	I	U	M	S
S	S	E	C	C	A	E	X	R	L	K	Y	O	S	A	M	E	D	E	Y	T	J	B
I	P	I	L	Z	T	R	A	N	S	P	L	A	N	T	V	H	A	I	M	E	N	A

NONTUNNELED	STEAL SYNDROME
PERITONEAL DIALYSIS	SURGEON
POTASSIUM	TRANSPLANT
PREVENTION	TREATMENT
PROTEIN	TUNNELED
REGISTERED NURSE	URINE
RENAL DIET	VENOUS
STAGES	



Mercy Health Plaza
 5264 Council St. NE
 Cedar Rapids, IA 52402

Mercy Medical Center
 701 10th St. SE
 Cedar Rapids, IA 52403

Mercy Dialysis—Vinton
 502 N. 9th Ave
 Vinton, IA 52349

What are the differences between phosphorus binders?

Many different phosphate binders are used to control phosphorus levels, but the one binder that is “best” for everyone has not yet been found! No one binder is effective for, and acceptable to, every person. Sometimes, a combination of binders is the most effective regimen. Your adherence to your binder prescription is vital to reducing serum phosphorus levels¹.

All phosphorus binders bind to a limited amount of phosphorus, meaning if you are eating more phosphorus than what your binder can bind to your body is absorbing the remaining phosphorus. The amount of phosphorus a binder can bind to is known as the “binding power.” The binding power is different for each binder, see Table 1.

Factors that impact the binding power of phosphorus binders

Phosphorus absorption

- Some people absorb more phosphorus from their food than others
- The type of phosphorus you eat matters
 - **Added phosphorus:** phosphorus that has been added as an ingredient, usually found in processed foods.
 - **Our bodies absorb ~100% of added phosphorus.**
 - **Natural phosphorus:** phosphorus naturally in foods, has not been added as an ingredient.
 - **Animal based natural phosphorus:** Our bodies absorb **40-60%**⁵
 - **Plant based natural phosphorus:** Our bodies absorb **~40%**⁵

Acid content (pH) of the stomach and small intestines

- Some binders work better in only one pH range while others work well in a variety of pH ranges

Table 1: Binding Power of commonly used phosphorus binders compared to phosphorus content in various foods

<u>Brand Name</u>	<u>Generic or Chemical Name</u>	<u>Binding Power</u>	<u>Amount of phosphorus in various foods</u>	
2 Tums EX	Calcium carbonate 500-600 mg	39 mg phos ⁴	Baked beans, ½ cup	133 mg
			Cheese, 1 oz	170 mg
Fosrenol	Lanthanum Carbonate 1000 mg	320 mg phos ²	Chocolate candy bar (~ 2 oz)	~100 mg
			Macaroni and cheese 1 cup	442 mg
PhosLo	Calcium acetate 667-668 mg	45 mg phos ⁴	Milk, 1 cup	220 mg
Renagel/Renvela	Sevelamer HCl 800 mg/Sevelamer Carbonate 800mg	21 mg phos ⁴	Ice Cream ½ cup (soft serve chocolate)	100 mg
Auryxia	Ferric Citrate 210mg	46 mg phos ⁴	Instant Oatmeal	138 mg
Velphoro	Sucroferic Oxyhydroxide 500mg	130 mg phos ^{3,4}	Steak, 6 oz	375 mg
			Egg, 1 large egg	95mg
<u>Note:</u> The “binding power” listed above is <i>approximate</i> .			Pizza (thin crust), 1 slice	255 mg

Resources

1. National Kidney Foundation. Clinical Practice Guidelines for Bone Metabolism and Disease in Chronic Kidney Disease. *American Journal of Kidney Diseases*, 42, Suppl 3; 2003:S1-201.
2. Hutchison AJ, Maes B, Vanwalleghen J et al. Efficacy, tolerability and safety of lanthanum carbonate in hyperphosphatemia: A 6-month, randomized, comparative trial versus calcium carbonate. *Nephron Clin Pract*, 2005; 100: c8-c19.
3. Wilhelm M, Gaillard S, Rakov V, Funk F. The iron-based phosphate binder PA21 has potent phosphate binding capacity and minimal iron release across a physiological pH range in vitro. *Clin Nephrol*. 2014; 81(4):251-258.
4. Lisa Gutenkunst, MEd, RD, CSR, CDN, FNKF. An Update on Phosphate Binders: A Dietitian’s Perspective. *Journal of Renal Nutrition*, Vol 26, No 4 (July), 2016: pp 209-218.
5. St-Jules, D. E., Jagannathan, R., Gutekunst, L., Kalantar-Zadeh, K., & Sevcik, M. A. (2017). Examining the Proportion of Dietary Phosphorus From Plants, Animals, and Food Additives Excreted in Urine. *Journal of renal nutrition: the official journal of the Council on Renal Nutrition of the National Kidney Foundation*, 27(2), 78–83.



Ten Benefits of Home Dialysis

- Feel Better**
- More Control**
- Freedom**
- Flexible Schedule**
- Less Limited Diet**
- More Flexible Fluid Intake**
- More Time for Work or School**
- Easier to Travel**
- Less Travel to Clinic**
- More Comfortable**

For More Information On Home Dialysis

Visit the Qsource ESRD Network 12 website at www.heartlandkidney.org or call **800-444-9965**.

For more information or to file a grievance, please contact:
 Qsource ESRD Network 12
 920 Main, Suite 801 | Kansas City, MO 64105
 Toll-Free Patient Line: (800) 444-9965
net12@nw12.esrd.net

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