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PATIENT TUTORIAL
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Hypophosphatemia (Low Phosphate)

Normal Level 1.13 – 1.8

Phosphate (Pi) is a mineral found in food and is essential for healthy bone formation. During kidney failure the kidneys can not get rid of phosphate and your blood Pi level starts to climb.

However sometimes your blood phosphate level can be too low. This can cause the following symptoms:

- Changes in your mental state (e.g. anxiety, irritability, or confusion)
- Bone issues, such as pain and fragility
- Irregular breathing.
- Fatigue.
- Loss of appetite.
- Muscle weakness.
- Weight gain or loss.

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Common cause of a low phosphate in Chronic Kidney Disease (CKD)

- Poor dietary intake
- Malabsorption or vomiting
- Vitamin D deficiency
- Phosphate binders
- Post Parathyroidectomy

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1) Poor dietary intake/ Malabsorption

Various medical conditions can cause a drop in appetite or poor absorption of your nutrients. Some of the common ones for people with CKD are:

- Low haemoglobin level (Hb)
- Infection
- Poor dialysis clearance due to fistula problems
- Stomach ulcers
- Gastroenteritis

Your dialysis team, Nephrologist, Dialysis Nurse and Dietitian will be able to help find out what is causing your poor appetite and help with medical treatment if needed.

If there is no medical cause your dietitian will review your diet and might recommend fortifying your meals or suggest a nutritional supplement to help boost your intake. During this time no phosphate restriction is needed.

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2) Vitamin D Deficiency

This is common in CKD as the kidney helps activate Vitamin D in your body so that it can be used.

Your nephrologist will prescribe active Vitamin D (1 alpha) if your phosphate level is low provided your calcium level is not raised as well. Vitamin D improves the absorption of both phosphate and calcium from your gut.

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3) Phosphate Binders

Phosphate binders are commonly prescribed to help bring your phosphate level down. The most common binders are Phosphosorb, B Cal D, Calichew and ENO Tums.

Your nephrologist may ask you to stop your phosphate binder if your blood level falls too low. Please never stop your binder without checking with your nephrologist first.

Depending on your calcium level, your nephrologist may change the time when you take your binder e.g. between meals rather than with meals. You may also need a Vitamin D supplement.

4) Parathyroidectomy

This is an operation to remove some of your parathyroid glands to help bring down your parathyroid hormone and the serum phosphate levels.

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Sometimes your phosphate and calcium can drop very low after a parathyroidectomy operation. This often requires in hospital monitoring. Your nephrologist will assess you and see whether you will still need any supplementation of Vitamin D or calcium and if you should continue with your binder.

It is important to work with your dialysis team and take your medications as prescribed to keep you healthy.