

# Know Your Numbers

Patient Information Leaflet



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## Introduction

If you have kidney (renal) disease, to receive the best possible treatment you need regular monitoring by hospital staff.

We monitor the effectiveness of your treatment by assessing the numbers from the many measurements and blood tests that will be taken. Knowing your numbers will help us to:

- Assess how well your treatment is going,
- Identify whether your treatments needs to be altered or changed,
- Understand some of your symptoms.

## How do I find out my numbers?

You will be told your numbers by hospital staff when you attend for an appointment or during a home visit. If not, please ask for them. We will be able to discuss your numbers with you.

## What numbers are measured?

Haemoglobin (Hb) is the substance in red blood cells which carries oxygen around the body. Too low a level of Hb is known as anaemia. Anaemia causes tiredness, shortness of breath and paleness - it may need treatment with iron supplements or with erythropoietin (EPO) injections.

## Calcium and Phosphate

Calcium and phosphate are the most important minerals in your bones. Patients with kidney (renal) disease will have raised phosphate levels which may cause itching, while your calcium level will tend to fall.

## Parathyroid Hormone (PTH)

Parathyroid Hormone (PTH) stimulates the natural breakdown of bone to release calcium and phosphate into the blood.

Levels of PTH become very high in patients with advanced kidney disease. This is one cause of renal bone disease.

Phosphate binding tablets (e.g. Calcichew, Adcal, Phosex, Renegel, Lanthanum, Calcitriol) and Vitamin D (e.g. alfacalcidol) may be prescribed by your clinician to help prevent renal bone disease.

## Potassium

Potassium is a mineral that is normally removed by the kidneys or by dialysis. Too high or low a potassium level may cause a disturbance to the rhythm of your heart.

High potassium levels are found in advanced kidney disease. If potassium levels are too high it may be dangerous and may result in a heart attack.

## Bicarbonate

Patients with kidney (renal) disease are unable to remove as much acid from the body as patients with fully functional kidneys. Low levels of bicarbonate in your blood may indicate your kidneys have difficulty maintaining the balance of acid in your body.

## Blood Pressure (BP)

Your blood pressure is the pressure produced by the heart to pump blood around your body.

Increased blood pressure increases the risk of heart attacks and strokes. Blood pressure tablets may be prescribed by your clinician if you suffer from high blood pressure.

These tablets may make your kidneys work harder and so are likely to be an important factor in any decrease of kidney function.

## Creatinine

Creatinine is one of the most important waste products removed by the kidneys. It provides your doctors with an easy way to monitor how effectively your kidneys are working at clearing waste products.

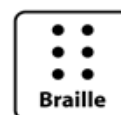
Hospital staff use complicated numbers derived from levels of urea (another waste product) and creatinine to measure kidney function (eGFR – estimated Glomerular Filtration Rate) or dialysis adequacy such as URR (Urea reduction Ratio), KT/V (measures how effective haemodialysis treatment is) .

## eGFR

eGFR is an estimate of the your kidney function calculated from your creatinine values.

There are five stages of kidney disease, details of which are in the Chronic Kidney Disease leaflet.

Standard	Range
Haemoglobin (Hb) (all CKD stages)	10.5 – 12.5g/dl
Calcium (Ca) (CKD 3 & 4) (Dialysis)	2.2 – 2.6 mmol/l 2.2 – 2.5 mmol/l
Phosphate(Pi) (CKD 3 & 4) (Dialysis)	0.9 – 1.5 mmol/l 1.2-1.8 mmol/l
Potassium (K) (Dialysis)	3.5-6.5 mmol/l
Bicarbonate (HCO <sub>3</sub> )	20 -26 mmol/l
Parathyroid Hormone (PTH) –CKD 1-3 CKD 4 CKD 5	Local normal 2X local normal 2-4 x Local normal range
Systolic BP (when your heart beats)	≤130 mmHg
Diastolic BP (when your heart relaxes)	≤80 mmHg



### If you require a special edition of this leaflet

This leaflet is available in large print, Braille, on audio tape or disk and in other languages on request. Please contact:

**Tel No: 0151 529 2906**

**Email: [interpretationandtranslation@aintree.nhs.uk](mailto:interpretationandtranslation@aintree.nhs.uk)**