



# Personalizing Your Hemophilia A Treatment Plan

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*A quick guide on the importance  
of pharmacokinetics (PK) for you*

# Understanding Pharmacokinetics (PK)

Throughout this guide, we'll refer to *pharmacokinetics*, or simply, *PK*. So, what is pharmacokinetics—and how do you pronounce it?

## *Phar·ma·co·ki·net·ics*

Pharmacokinetics is the study of the bodily **absorption**, **distribution**, **metabolism**, and **elimination** of drugs.

### **Absorption**

How drugs are **taken** into your body



### **Distribution**

How drugs **move** around in your body



### **Metabolism**

How drugs are **broken down** in your body



### **Elimination**

How drugs are **eliminated** from your body



## **The Role of PK in Personalizing Your Hemophilia A Treatment Plan**

PK testing allows your doctor to understand your unique PK profile and create a treatment plan that matches your needs. Talk to your physician about obtaining your PK profile.

# The Right Dose & the Right Infusion Frequency for You



The aim of hemophilia A treatment is to continuously maintain factor VIII at high enough levels with regular infusions to reduce the frequency of bleeding episodes. This is known as prophylaxis, which is the standard of care for treatment of hemophilia A in the United States.

The amount of factor VIII (the drug dose) and the frequency at which it must be given to prevent spontaneous bleeds varies from person to person. PK testing allows doctors to better understand how factor VIII levels behave in your body, so they can better **personalize** and fine-tune your treatment by defining the **right dose and infusion frequency for you**.

## **Meet Oscar**

Oscar, a teenage boy, has been selected for his school swimming team but is worried about his risk of bleeds if he trains more regularly.

PK testing could help to adjust his infusion schedule so that his levels of FVIII are high enough on the days when he wants to train.\*



\*These are fictional scenarios for illustration only. Treatment decisions should be made by a physician on an individual basis.

# PK Testing & Your PK Profile

With PK testing, your doctor defines your PK profile. To do so, the doctor measures factor VIII levels in blood samples taken from you over a period of time.

Like a fingerprint, a PK profile is unique for every person with hemophilia A – there is nobody else quite like you! **This unique PK profile can be used to make sure that the drug is given in the RIGHT AMOUNT (the drug dose) and at the RIGHT FREQUENCY.**

## Meet William

William is a 35-year-old man who loves the outdoors and hiking. Together with his doctor, they have been having difficulty finding the right infusion schedule to prevent bleeds.

PK testing could help him find the infusion frequency to match his needs.\*



*\*These are fictional scenarios for illustration only. Treatment decisions should be made by a physician on an individual basis.*

# Four Steps to Getting Your PK Profile



First, your doctor takes blood samples after one or more infusions of factor VIII during your normal treatment regimen.

1

Then, the amount of factor VIII in each blood sample is measured by your doctor.

2

Your doctor will generate your unique PK profile based on your measurements.

3

Together, you and your doctor determine the best treatment for you based on your needs: the right amount of factor to infuse each time (drug dose) and the right frequency of infusions for you.

4

# Reading Your PK Profile

When you and your physician review your PK profile, you'll likely be introduced to a few more terms.

**Let's break them down:**

## Area Under the Curve (AUC)

The total amount of factor that is absorbed and distributed in your bloodstream over a period of time. It is used by your doctor to define the **right dose** for you.

## Clearance

The speed at which factor is eliminated from your body. The higher the clearance, the faster your body breaks down and eliminates factor. Clearance helps your doctor define the **right frequency** of infusion for you.

## Half-Life

The amount of time it takes for factor levels to get reduced by half (50%) of what they originally were right after your infusion. It helps your doctor understand how long factor remains active in your body.

## Trough Level

The minimum factor level that your doctor sets individually with you based on your **personal needs**. The trough level indicates to your doctor when you should take another infusion.

Talk to your physician about obtaining your PK profile to personalize your treatment plan.

# Your PK Profile Helps You Choose the Right Factor VIII Product for You



Think of your factor VIII product as your cell phone, and the PK profile (area under the curve, half-life, clearance, and trough level) as the charge for your cell phone.

## Area Under the Curve (AUC)

The amount of charge that is used by your phone over time after you fully charge it.



## Half-Life

How long it takes for your phone to go from 100% to 50% charge.



## Clearance

How quickly your cell phone battery loses its charge.



## Trough Level

The minimum level of battery life needed before your low battery notification appears.



You use your cell phone a lot, so you would want more battery charge available throughout your day (**higher AUC**). You would also want it to take longer for your cell phone battery to go from 100% charged to 50% charged (**longer half-life**), and you would want your phone to more slowly lose its charge (**slower clearance**). You also want to make sure you have at least a minimum amount of battery charge left so your phone doesn't run out of charge (**right trough level**).



Is your cell phone charged? If so, scan the QR code for Living With Hemophilia content or learn more by visiting [www.livingwithhemophilia.com](http://www.livingwithhemophilia.com)