Table S1: Strongest correlations between all treatment effects and treatment effects of potassium and phosphorous. This estimated structure of correlations is used to infer the treatment effects based on the intake and the corresponding concentrations.

Treatment-level effects of nutrients		
Effect 1	Effect 2	Correlation
Renavit \rightarrow fP-Pi Gender \rightarrow fP-Pi Sodium \rightarrow P-K Protein, g/kg \rightarrow P-Alb Sodium \rightarrow P-K	$ \begin{array}{l} {\rm Potassium} {\rightarrow} \ {\rm P-Alb} \\ {\rm Potassium} {\rightarrow} \ {\rm P-Alb} \\ {\rm Potassium} {\rightarrow} \ {\rm fP-Pi} \\ {\rm Potassium} {\rightarrow} \ {\rm P-Alb} \\ {\rm Potassium} {\rightarrow} \ {\rm P-K} \\ \end{array} $	0.074 0.071 0.065 0.063 0.058
Calcium \rightarrow P-K MUFA, E% \rightarrow P-K PUFA, E% \rightarrow P-Alb Diabetes medication \rightarrow P-Alb Vitamin D \rightarrow fP-Pi	$\begin{array}{l} {\rm Potassium} \rightarrow {\rm P\text{-}K} \\ {\rm Potassium} \rightarrow {\rm P\text{-}Alb} \end{array}$	0.053 0.052 0.050 0.047 0.045
Blood lipid medication \rightarrow fP-Pi Phosphorous \rightarrow P-Alb PUFA, E% \rightarrow fP-Pi Salt \rightarrow P-K Hydroxycholecalciferol \rightarrow P-K	$\begin{array}{l} {\rm Potassium} \to {\rm fP\text{-}Pi} \\ {\rm Potassium} \to {\rm P\text{-}Alb} \\ {\rm Potassium} \to {\rm P\text{-}K} \\ {\rm Potassium} \to {\rm P\text{-}Alb} \\ {\rm Potassium} \to {\rm P\text{-}K} \end{array}$	0.044 0.043 -0.042 -0.043 -0.045
Sodium \rightarrow fP-Pi Sodium \rightarrow P-Alb MUFA, E% \rightarrow P-Alb P-Alb level PUFA, E% \rightarrow P-Alb	$\begin{array}{l} \operatorname{Potassium} \to \operatorname{P-Alb} \\ \operatorname{Potassium} \to \operatorname{P-Alb} \\ \operatorname{Potassium} \to \operatorname{P-Alb} \\ \operatorname{Potassium} \to \operatorname{P-K} \\ \operatorname{Potassium} \to \operatorname{fP-Pi} \end{array}$	-0.048 -0.049 -0.051 -0.056 -0.059
$\begin{array}{l} {\rm Potassium} \rightarrow {\rm P\text{-}K} \\ {\rm Blood\ lipid\ medication} \rightarrow {\rm P\text{-}K} \\ {\rm Calcium} \rightarrow {\rm P\text{-}K} \\ {\rm MUFA,\ E\%} \rightarrow {\rm P\text{-}K} \\ {\rm Protein,\ E\%} \rightarrow {\rm fP\text{-}Pi} \end{array}$	$\begin{array}{l} Phosphorous \rightarrow P\text{-}K \\ Phosphorous \rightarrow fP\text{-}Pi \\ Phosphorous \rightarrow fP\text{-}Pi \\ Phosphorous \rightarrow P\text{-}K \\ Phosphorous \rightarrow fP\text{-}Pi \end{array}$	0.066 0.054 0.051 0.050 0.044
Salt \rightarrow fP-Pi PUFA, E% \rightarrow fP-Pi Calcium \rightarrow P-K SFA, E% \rightarrow fP-Pi Hydroxycholecalciferol \rightarrow P-K	$\begin{array}{l} Phosphorous \rightarrow P\text{-}Alb \\ Phosphorous \rightarrow P\text{-}Alb \\ Phosphorous \rightarrow P\text{-}K \\ Phosphorous \rightarrow fP\text{-}Pi \\ Phosphorous \rightarrow fP\text{-}Pi \end{array}$	0.043 0.042 0.038 0.036 -0.037
SFA, E% \rightarrow fP-Pi Carbonhydrates, E% \rightarrow P-K Phosphorous \rightarrow fP-Pi Salt \rightarrow P-Alb Carbonhydrates, E% \rightarrow fP-Pi	$\begin{array}{l} Phosphorous \rightarrow P\text{-}K \\ Phosphorous \rightarrow P\text{-}K \\ Phosphorous \rightarrow P\text{-}Alb \\ Phosphorous \rightarrow fP\text{-}Pi \\ Phosphorous \rightarrow P\text{-}K \end{array}$	-0.037 -0.039 -0.039 -0.039 -0.040
P-Alb	Phosphorous \rightarrow fP-Pi	-0.042
PUFA, E% \rightarrow fP-Pi SFA, E% \rightarrow P-Alb Carbonhydrates, E% \rightarrow P-K Calcium \rightarrow fP-Pi	$Phosphorous \rightarrow fP-Pi$ $Phosphorous \rightarrow fP-Pi$ $Phosphorous \rightarrow fP-Pi$ $Phosphorous \rightarrow P-K$	-0.048 -0.053 -0.060 -0.063