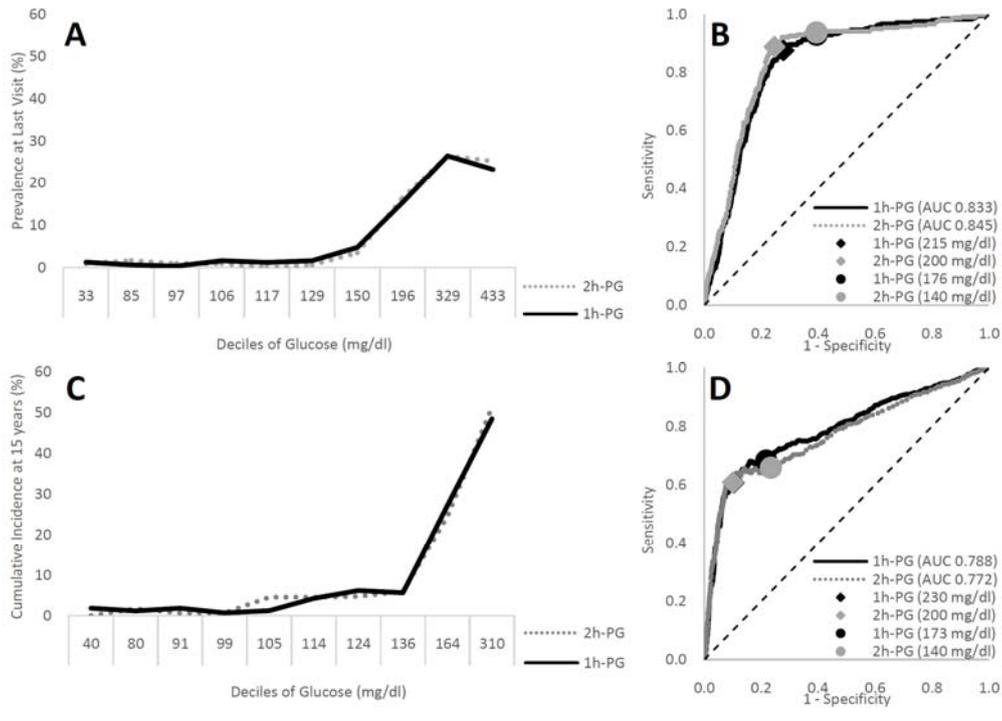


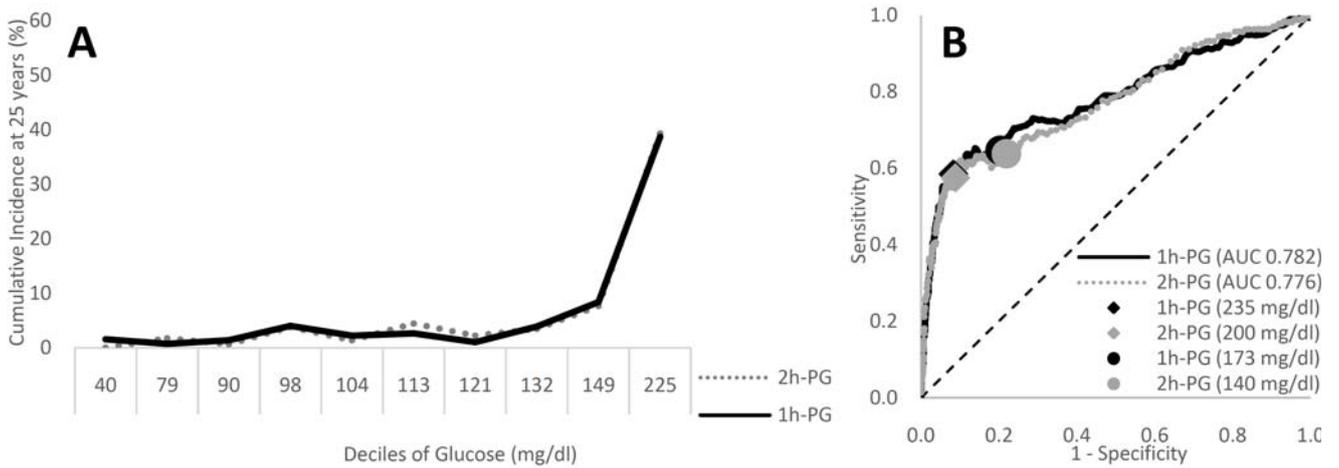
SUPPLEMENTARY DATA

Supplementary Figure S1. Prevalence (A and B) and predicted diabetic retinopathy at 15-years (C and D) based on direct ophthalmoscopy. Retinopathy (any) in relation to glucose deciles (A and C) and receiver operating characteristic curves (B and D) of 1h-plasma glucose and 2h-plasma glucose concentrations. Includes individuals on diabetic medications. In Figures A and C, the glucose values shown are the lower bound for each decile.



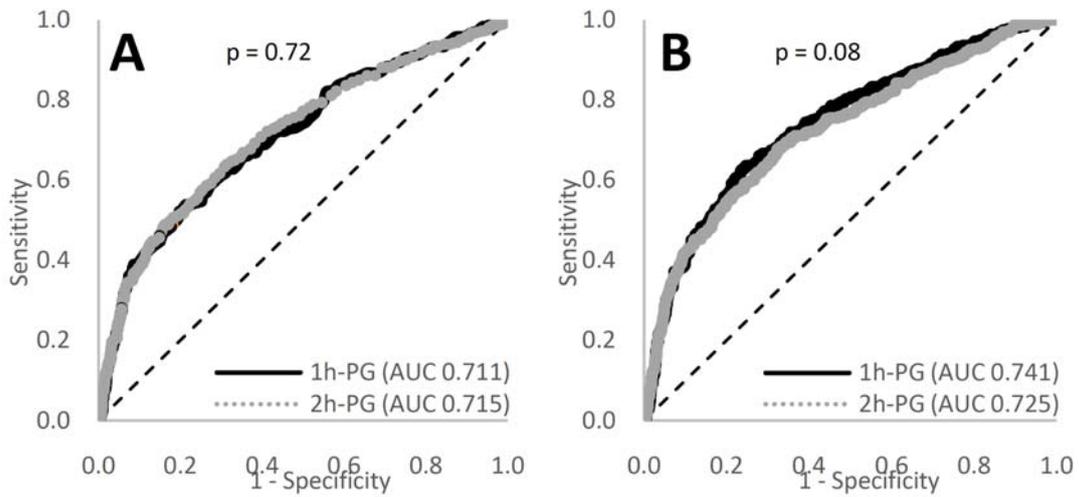
SUPPLEMENTARY DATA

Supplementary Figure S2. Predicted severe diabetic retinopathy at 25 years (A and B) diagnosed by direct ophthalmoscopy (excluding individuals on diabetic medications). (A) Predicted diabetic retinopathy at 25-years based on glucose deciles of 1h-plasma glucose and 2h-plasma glucose concentrations. (B) Receiver operating characteristic curves for 1h-plasma glucose and 2h-plasma glucose concentrations.



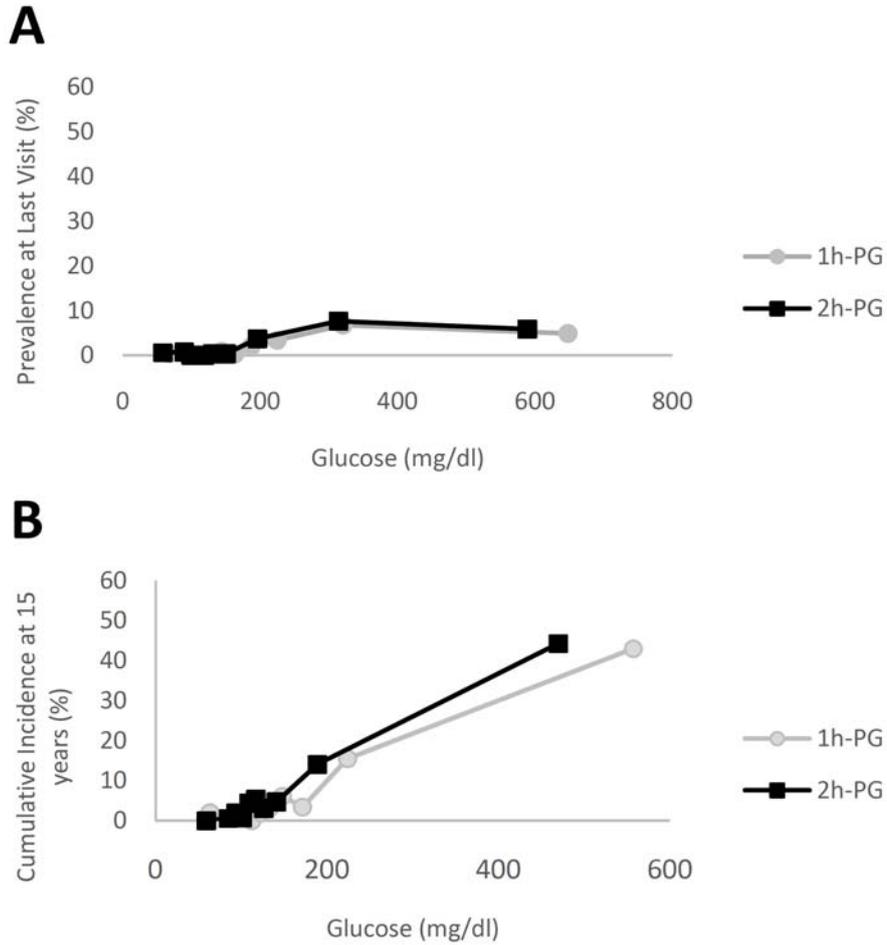
SUPPLEMENTARY DATA

Supplementary Figure S3. Receiver operating characteristic curve analyses comparing 1h-PG and 2h-PG for any retinopathy diagnosed by retinal photography. (A) Unadjusted. (B) Adjusted for follow-up time



SUPPLEMENTARY DATA

Supplementary Figure S4. Prevalence (A) and predicted diabetic retinopathy at 15-years (B) based on direct ophthalmoscopy. Prevalence and cumulative incidence based on deciles of 1h-PG and 2h-PG, and plotted using the mid-point of the glucose range within each decile.



SUPPLEMENTARY DATA

Supplementary Table S1. Cross-tabulation of 1h-PG and 2h-PG deciles. Numbers represent counts.

No retinopathy											
2h-PG	1h-PG										Total
	1	2	3	4	5	6	7	8	9	10	
1	120	56	45	29	19	13	9	2	0	0	293
2	61	64	44	40	27	14	11	6	0	0	267
3	50	75	56	42	42	32	12	5	0	0	314
4	23	50	48	52	50	21	22	2	1	0	269
5	16	37	53	52	49	52	30	10	1	0	300
6	10	11	32	50	45	73	49	13	3	0	286
7	1	4	6	13	46	73	81	56	2	0	282
8	1	0	2	4	5	16	64	151	36	0	279
9	0	0	0	0	0	0	0	33	189	35	257
10	0	0	0	0	0	0	0	0	33	228	261
Total	282	297	286	282	283	294	278	278	265	263	2808

Any retinopathy											
2h-PG	1h-PG										Total
	1	2	3	4	5	6	7	8	9	10	
1	1	0	1	0	0	0	0	0	0	0	2
2	1	0	0	0	0	0	0	0	0	0	1
3	0	1	0	0	0	0	0	0	0	0	1
4	1	0	1	0	0	0	0	0	0	0	2
5	0	4	0	0	0	1	1	0	0	0	6
6	0	0	0	2	0	0	1	0	0	0	3
7	0	0	0	0	0	0	1	2	4	0	7
8	0	0	0	0	0	0	0	9	3	0	12
9	0	0	0	0	0	0	0	0	23	6	29
10	0	0	0	0	0	0	0	0	1	23	24
Total	3	5	2	2	0	1	3	11	31	29	87

SUPPLEMENTARY DATA

Supplementary Table S2. Concordance of 1h-PG and 2h-PG in classifying volunteers into normal glucose tolerance, impaired glucose tolerance, and type 2 diabetes categories

<i>Cross-sectional (n = 2895)</i>					
	2h-PG		1h-PG		Total
	NGT	IGT*	Type 2 Diabetes†		
NGT	1585	182	10		1777
IGT*	152	252	51		455
Type 2 Diabetes†	2	58	603		663
Total	1739	492	664		2895
Weighted $\kappa = 0.81$ (95% CI 0.79, 0.82)					
<i>Longitudinal (n = 1703)</i>					
	2h-PG		1h-PG		Total
	NGT	IGT*	Type 2 Diabetes†		
NGT	1203	79	2		1284
IGT*	102	93	20		215
Type 2 Diabetes†	2	15	187		204
Total	1307	187	209		1703
Weighted $\kappa = 0.77$ (95% CI 0.74, 0.80)					

* IGT cut-offs for 1h-PG (≥ 173 mg/dl and < 230 mg/dl) and 2h-PG (≥ 140 mg/dl and < 200 mg/dl)

† Type 2 diabetes cut-offs for 1h-PG (≥ 230 mg/dl) and 2h-PG (≥ 200 mg/dl)

2h-PG, 2h plasma glucose; 1h-PG, 1h plasma glucose; NGT, normal glucose tolerance; IGT, impaired glucose tolerance; CI, confidence interval.

SUPPLEMENTARY DATA

Supplementary Table S3. Discriminatory properties of 1h-plasma glucose and 2h-plasma glucose concentration for any retinopathy and severe retinopathy

Model 1	C-statistic (95% CI)*	Model 2	C-statistic (95% CI)*	P-value†
Any retinopathy‡				
1h-PG	0.778 (0.755, 0.801)	2h-PG	0.759 (0.735, 0.784)	0.04
1h-PG	0.778 (0.755, 0.801)	1h,2h-PG	0.780 (0.757, 0.803)	0.44
2h-PG	0.759 (0.735, 0.784)	1h,2h-PG	0.780 (0.757, 0.803)	<0.001
Severe retinopathy‡				
1h-PG	0.796 (0.751, 0.840)	2h-PG	0.790 (0.748, 0.833)	0.72
1h-PG	0.796 (0.751, 0.840)	1h,2h-PG	0.803 (0.762, 0.844)	0.26
2h-PG	0.790 (0.748, 0.833)	1h,2h-PG	0.803 (0.762, 0.844)	0.15

* C-statistic were calculated from models accounting for time-to-event and are analogous to the area under the ROC curve.

† P-values indicate significance of the difference in C-statistic from that of Model 1.

‡ n = 1703

Data are reported as C-statistic (95% CI, confidence interval). 1h-PG 1h plasma glucose model; 2h-PG, 2h plasma glucose model; 1h,2h-PG, 1h and 2h plasma glucose model.

Supplementary Table S4. Concordance of direct ophthalmoscopy and fundus photography exams to assign retinopathy (n = 1322, missing = 39)

<i>Groups</i>				
DO	Fundus Photography			Total
	Normal	Non-severe	Severe	
Normal	933	126	7	1066
Non-severe	21	63	5	89
Severe	25	102	40	167
Total	979	291	52	1322
Weighted $\kappa = 0.53$ (95% CI 0.48, 0.57)				
<i>Dichotomize</i>				
DO	Fundus Photography			
	Normal	Any	Total	
Normal	933	133	1066	
Any	46	210	256	
Total	979	343	1322	
$\kappa = 0.62$ (95% CI 0.57, 0.67)				

DO, direct ophthalmoscopy; CI, confidence interval.