

SUPPLEMENTARY DATA

**Supplementary Table 1.** characteristics of the risk scores

	<b>Wilson</b>	<b>Balkau (C)</b>	<b>Kahn (C)</b>	<b>Swiss Diabetes Association</b>	<b>Kahn (CB)</b>	<b>FINDRISC</b>	<b>Griffin</b>
Study	Framingham	DESIR	ARIC	FINRISK	ARIC	FINRISK	Ely and Wessex Study
Country	USA	France	USA	Finland	USA	Finland	England
Number of patients	3,140	3,817	12,729	4,435	12,729	4,435	1,077
Patients age (years) *	54.0 (9.8)	30 - 65	45 - 64	25 - 64	45 - 64	25 - 64	40 - 64
Follow-up (years)	8 y	9 y	10 y	5 – 10 y	10 y	5 -10 y	0 <sup>†</sup>
Threshold to define high risk	33%	30%	33%	15 points	46%	12 points	37%
AROC	0.85	0.713 <sup>‡</sup> - 0.827 <sup>§</sup>	0.71	0.86	0.79	0.86	0.8

\* mean (SD) or range

† cross-sectional study

‡ men

§ women

AROC : Area Under the ROC Curve

C : clinical, CB : clinical and biological (only specified in case of various equations provided by the authors)

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**Supplementary Table 2.** Variables used in the risk scores for type 2 diabetes

	Wilson	Balkau (C)	Kahn (C)	Swiss Diabetes Association	Kahn (CB)	FINDRISC	Griffin
Age			X	X	X	X	X
Sex							X
Genetics							
Familial history	X	X <sup>*</sup>	X	X	X		X
Personal history				X		X	
Black race			X		X		
Lifestyle							
Smoking		X <sup>†</sup>	X				X
Drinking					X		
Eating				X		X	
Physical activity				X		X	
Anthropometry							
BMI	X			X		X	X
Weight			X				
Height			X		X		
Waist circumference		X	X	X	X	X	
Cardiovascular risk factors							
Resting pulse			X		X		
Hypertension	X	X	X	X	X	X	X
HDL-Cholesterol	X				X		
Triglycerides	X				X		
Other					X		X
Fasting glucose	X				X		
Prescribed Steroids							X
Uric acid					X		
Number of variables	5	4	9	8	11	7	7

\* women only

† men only

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**Supplementary Table 3.** Characteristics of the non-diabetic patients assessed by the scoring systems

	<b>Men (N=2,650)</b>	<b>Women (N=3,110)</b>	<b>p value</b>
Age	51.8 ± 10.7	53.2 ± 10.7	< 0.0001
Familial history, n (%)	505 (19.1)	696 (22.4)	0.002
Personal history,(anamnèse) n (%)	17 (0.6)	22 (0.7)	0.932
Personal history (gluc>=5.55) n (%)	1,214 (45.8)	727 (23.4)	<0.001
Smoking, n (%)	780 (29.4)	785 (25.2)	< 0.001
Drinking, n (%)	2,236 (84.4)	1,978 (63.6)	< 0.001
Not Drinking, n (%)	414 (15.6)	1,132 (36.4)	< 0.001
Physical activity, n (%)	1,453 (54.8)	1,806 (58.1)	0.013
Steroids Prescription, n (%)	34 (1.3)	35 (1.1)	0.584
BMI (kg/m <sup>2</sup> )	26.2 ± 3.7	24.9 ± 4.6	< 0.0001
Weight (kg)	80.5 ± 12.6	65.9 ± 12.2	<0.0001
Height (cm)	175.1 ± 7.1	162.8 ± 6.7	<0.0001
Waist circumference (cm)	94.7 ± 10.5	82.8 ± 11.7	< 0.0001
Resting pulse (bpm)	67 ± 10	68 ± 9	<0.0001
Hypertension, n (%)	1,500 (56.6)	1,317 (42.4)	< 0.0001
Fasting glucose (mmol/l)	5.52 ± 0.54	5.21 ± 0.52	< 0.0001
HDL-Cholesterol (mmol/l)	1.46 ± 0.36	1.82 ± 0.42	< 0.0001
Triglycerides (mmol/l)	1.60 ± 1.42	1.13 ± 0.58	< 0.0001
Uric acid (µmol/l)	359.1 ± 73.7	268.1 ± 64.8	<0.0001

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**Supplementary Table 4.** Proportion of high-risk participants according to each score (expressed in percentage and 95% confidence interval)

	<b>Wilson</b>	<b>Balkau (C)</b>	<b>Kahn (C)</b>	<b>Swiss Diabetes Association</b>	<b>Kahn (CB)</b>	<b>FINDRISC</b>	<b>Griffin</b>
Overall (N=5760)							
Men	1.6 (1.2-2.2)	4.2 (3.4-5.0)	12.8 (11.5-14.1)	13.5 (12.2-14.9)	13.7 (12.4-15.0)	22.9 (21.3-24.5)	24.9 (23.4-26.6)
Women	1.1 (0.8-1.6)	2.9 (2.4-3.6)	6.0 (5.2-6.9)	11.1 (10.0-12.3)	6.1 (5.3-7.0)	15.7 (14.5-17.1)	10.7 (9.6-11.8)
<65 years (N=4916)							
Men	1.8 (1.3-2.4)	3.6 (2.9-4.5)	11.8 (10.5-13.1)	10.9 (9.6-12.2)	12.8 (11.5-14.2)	18.9 (17.3-20.6)	18.8 (17.2-20.5)
Women	1.2 (0.8-1.7)	2.7 (2.1-3.4)	6.0 (5.1-7.0)	9.2 (8.1-10.4)	5.8 (5.0-6.8)	13.1 (11.9-14.5)	7.8 (6.8-8.9)

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**Supplementary Table 5.** Proportion of participants at high risk of developing type 2 diabetes according to each score, by gender and age group

	<b>Wilson</b>	<b>Balkau (C)</b>	<b>Kahn (C)</b>	<b>Swiss Diabetes Association</b>	<b>Kahn (CB)</b>	<b>FINDRISC</b>	<b>Griffin</b>
<b>Men</b>							
35-44 y	0.8	2.0	6.1	3.1	5.6	4.8	5.86
45-54 y	2.3	3.0	8.9	11.2	12.1	17.3	16.21
55-64 y	2.5	6.7	22.9	21.0	23.3	39.9	39.56
65-75 y	0.5	7.3	19.0	29.8	19.0	37.4	62.6
Total	1.6	4.2	12.8	13.5	13.7	22.9	24.9
<b>Women</b>							
35-44 y	0.7	1.4	2.6	1.9	1.6	3.5	1.29
45-54 y	1.0	2.3	3.9	7.3	4.6	10.9	5.06
55-64 y	1.8	4.5	11.4	18.1	11.0	24.6	16.74
65-75 y	0.8	4.0	6.3	21.9	7.8	30.1	26.74
Total	1.1	2.9	6.0	11.1	6.1	15.7	10.7

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**Supplementary Table 6.** Comparison of gender and age distributions between the CoLaus sample and the Swiss population for years 2003-6.

	CoLaus sample (n=6,188)	Swiss population 2003-6 (average N=3.846 million)
Women (%)	3,251 (52.5)	50.7
Age group		
35-44	2,051 (33.1)	32.2
45-54	1,682 (27.2)	27.4
55-64	1,657 (26.8)	23.2
65-75	798 (12.9)	17.3

Data for Switzerland obtained from the Federal Bureau of Statistics

<http://www.bfs.admin.ch/bfs/portal/fr/index/themen/01/02/blank/data/01.html>

**Supplementary Table 7.** Effect of reducing the Swiss Diabetes Association and FINDRISC scoring system cut-off points in the prevalence of subjects at risk of developing type 2 diabetes.

	Swiss Diabetes Association	FINDRISC
Men (N=2,650)		
-1 point (this study)	13.5 (12.2-14.9)	22.9 (21.3-24.5)
-2 points	18.2 (16.7-19.7)	29.0 (27.3-30.8)
-3 points	22.8 (21.2-24.4)	33.8 (32.0-35.6)
Women (N=3,110)		
-1 point (this study)	11.1 (10.0-12.3)	15.7 (14.5-17.1)
-2 points	14.8 (13.5-16.1)	20.2 (18.8-21.6)
-3 points	18.0 (16.6-19.4)	24.4 (22.9-25.9)

Results are expressed in percentage and 95% confidence interval for all subjects