SUPPLEMENTARY DATA

Supplementary Table 1. Definitions of key hemodynamic indices measured in this study.

Index	**Definition**
Incremental Elastic Modulus (E_{inc})	Measure of wall material stiffness. It is defined as the local slope of the incremental change in circumferential stress and the incremental change in circumferential length (strain) of the wall material at the operating range of stress and strain.
Arterial pulse wave velocity (PWV)	Velocity with which the pulse wave travels throughout the arterial tree and a measure of arterial stiffness. PWV is proportional to the square root of the incremental elastic modulus of the vessel wall given constant ratio of wall thickness to vessel radius.
Characteristic Impedance (Zc)	Impedance to pulsatile flow imparted by a specific arterial segment. It is a *local* arterial property determined by vessel size, stiffness and wall thickness.
Ascending Aortic Zc	Proximal aortic property that determines the amount of proximal aortic pressure increase for any given flow increase during early systole. It is an important determinant of aortic pulse pressure.
Elastance-thickness product	Product of E_{inc} of the wall material and wall thickness. It can be derived from measures of Zc if vessel size is known.
Compliance	Change in arterial volume relative to the change in arterial pressure.
Distensibility	Fractional (relative) change in arterial volume relative to the change in arterial pressure. In our study, it was assessed via the distensibility coefficient, which is the fractional (relative) change in arterial cross-sectional area relative to the change in arterial pressure.
Total arterial compliance	Summed compliance of the arterial tree. It is an important determinant of arterial pulse pressure.
Systemic Vascular Resistance	Ratio of mean arterial pressure / cardiac output. It is the "resistive" or "steady" component of afterload. Depends on microvascular properties: more specifically, it depends on the resistance of individual arterioles and number of arterioles in parallel (it is thus sensitive to arteriolar tone and rarefaction). It is an important determinant of mean arterial pressure.
Reflection magnitude	Ratio of the amplitude of the reflected wave / amplitude of the incident (forward) wave.
Reflected wave transit time	Time interval between onset of the incident (forward) wave and arrival of the reflected wave at the proximal aorta.

SUPPLEMENTARY DATA

Supplementary Table 2. Aortic root dimensions in subjects with normal FG, IFG and type-2 diabetes

	Normal FG (n=1654)	**Impaired FG (n=240)**	**type-2 diabetes (n=33)**	***P* value**
Unadjusted				
Proximal Ascending Aortic area (cm^2)	6.73 (6.64-6.82)	7.3 (7.05-7.54)	7.57 (6.92-8.22)	<0.0001*†
Indexed proximal Ascending Aortic area (cm^2/m)	4.93 (4.86-4.99)	5.2 (5.03-5.37)	5.26 (4.81-5.7)	0.003 *
Adjusted for age and gender				
Proximal Ascending Aortic area (cm^2)	6.8 (6.72-6.88)	6.9 (6.69-7.12)	7.11 (6.54-7.69)	0.42
Indexed proximal Ascending Aortic area (cm^2/m)	4.96 (4.91-5.02)	4.98 (4.82-5.13)	4.97 (4.56-5.38)	0.99

Numbers in parentheses indicate the 95% confidence intervals for the estimated marginal means for each group. Pairwise comparisons: * IFG vs. normal FG. † type-2 diabetes vs. normal FG. ‡ type-2 diabetes vs. IFG.

SUPPLEMENTARY DATA

Supplementary Table 3. Carotid Hemodynamic Indices in subjects with normal FG, IFG and type-2 diabetes

	Normal FG (n=1848)	**Impaired FG (n=267)**	**type-2 diabetes (n=33)**	***P* value**
Unadjusted				
Carotid PWV, m/s	6.87 (6.75-6.99)	7.06 (6.74-7.4)	7.73 (6.67-8.94)	0.13
Carotid Eh (kdyne/cm)	14 (13-14)	15 (14-17)	18.67 (13.44-25.94)	0.011*
Carotid Zc, mmHg·ms·mL^{-1}	2.0 (1.96-2.04)	1.92 (1.83-2.02)	2.09 (1.80-2.42)	0.25
Carotid Cross-sectional area, cm^2	0.27 (0.27-0.28)	0.29 (0.28-0.3)	0.30 (0.27-0.32)	<0.0001*
Reflection magnitude	0.53(0.52-0.54)	0.54(0.52-0.55)	0.52(0.49-0.55)	0.63
Adjusted for age and gender				
Carotid PWV, m/s	6.89 (6.77-7.01)	6.93 (6.61-7.26)	7.36 (6.46-8.39)	0.62
Carotid Eh (kdyne/cm)	14 (13-14)	14 (13-16)	16 (12-21)	0.67
Carotid Zc, mmHg·ms·mL^{-1}	1.99 (1.96-2.03)	1.99 (1.9-2.08)	2.14 (1.87-2.44)	0.58
Carotid Cross-sectional area, cm^2	0.28 (0.27-0.28)	0.28 (0.27-0.28)	0.27 (0.26-0.29)	0.85
Reflection magnitude	0.53(0.53-0.54)	0.53(0.52-0.55)	0.52(0.47-0.56)	0.69
Adjusted for age, gender, MAP and MAP-squared				
Carotid PWV, m/s	6.92 (6.8-7.04)	6.8 (6.5-7.12)	7.16 (6.3-8.13)	0.69
Carotid Eh (kdyne/cm)	14 (13-15)	14 (12-15)	15 (11-19)	0.77
Carotid Zc, mmHg·ms·mL^{-1}	1.99 (1.96-2.03)	1.96 (1.87-2.06)	2.1 (1.84-2.39)	0.60
Carotid Cross-sectional area, cm^2	0.28 (0.27-0.28)	0.28 (0.27-0.28)	0.27 (0.25-0.29)	0.90
Reflection magnitude	0.53(0.53-0.54)	0.53(0.52-0.55)	0.51(0.47-0.55)	0.60

Numbers in parentheses indicate the 95% confidence intervals for the estimated marginal means for each group.
Pairwise comparisons: * IFG vs. normal FG. † type-2 diabetes vs. normal FG. ‡ type-2 diabetes vs. IFG.