

**Table S2.** Population characteristics

<i>Author, year (Reference)</i>	<i>Sex</i>	<i>Number of participants</i>	<i>Mean age</i>	<i>Mean body weight (kg)</i>	<i>BMI (kg/m<sup>2</sup>)</i>	<i>Nutritional status *</i>	<i>Medicine intake</i>	<i>Health status</i>
<i>Afousi, 2018 (45)</i>	Mixed	18	54.78 ± 6.19	85.38 ± 11.23	29.38 ± 0.93	Pre-obesity	Yes	Type 2 diabetes
		17	53.12 ± 4.84	82.64 ± 11.18	29.18 ± 0.88			
<i>Akazawa, 2012 (26)</i>	Female	11	59 ± 5	54 ± 2	22.7 ± 1.0	Normal weight	NR	Healthy individuals
<i>Alkatib, 2014 (42)</i>	Female	8	55.2 ± 3.6	69.1 ± 15.1	NR	NR	NR	Healthy individuals
<i>Benda, 2015 (27)</i>	Mixed	10	63 ± 8	87.6 ± 23.6	28.1 ± 7.5	Pre-obesity	Yes	Heart failure
	Male	10	64 ± 8	89.7 ± 11.9	28.9 ± 4.7			
<i>Boonpin, 2017 (53)</i>	Female	20	55.35 ± 2.84	59.11 ± 8.9	25.22 ± 3.06	Pre-obesity	Yes	Hypertension and/or diabetes
<i>Borges, 2021 (64)</i>	Mixed	10	57 ± 10.1	NR	23.5 ± 4	Normal weight	Yes	Chagas heart disease
<i>Bouaziz, 2019 (75)</i>	Mixed	30	72.9 ± 2.5	77.4 ± 15.4	28.7 ± 5.6	Pre-obesity	Yes	Type 2 diabetes, hypertension, dyslipidaemia, osteoporosis, obesity
<i>Chacaroun, 2020 (83)</i>	Mixed	12	52 ± 12	NR	31.2 ± 2.4	Obesity class 1	Yes	Obesity
		11	56 ± 11	NR	31.8 ± 3.2			
<i>Chasland, 2021 (84)</i>	Male	21	59.7 ± 5.1	101.4 (94.7–108)	33.7 (31.7–35.5)	Obesity class 1	Yes	Healthy individuals
		20	59 ± 4.4	109.2 (102.4–116.1)	34.4 (32.4–36.4)			
<i>Conraads, 2015 (85)</i>	Mixed	100	57 ± 8.8	84.7 ± 14.4	28.0 ± 4.4	Pre-obesity	Yes	Coronary artery disease
		100	59.9 ± 9.2	85.0 ± 13.7	28.5 ± 4.3			
<i>Cornelissen, 2014 (34)</i>	Female	146	61.8 ± 0.73	80.4 ± 1.05	27.4 ± 0.34	Pre-obesity	Yes	Coronary artery disease
<i>Dall, 2015</i>	Mixed	9		79.0 ± 14.3	26.7 ± 4	Pre-obesity	Yes	Heart transplant

(87)		8	51.9 ± 33-70	78.1 ± 13.3	22.94 ± 4	Normal weight		
<i>da Silva, 2012</i> (86)	Mixed	10	50.7 ± 9.2	NR	29 ± 6	Pre-obesity	Yes	Type 2 diabetes, metabolic syndrome
		10	52.2 ± 7.5	NR	26 ± 3			
<i>Eigendorf, 2019</i> (43)	Female	146	53 ± 4.9	72.1 ± 13.7	25.6 ± 4.4	Pre-obesity	NR	Hypertension, depression, hypothyroidism
<i>Eleutério-Silva, 2013</i> (35)	Female	11	46.68 ± 3.43	83.18 ± 26	34.93 ± 7.54	Obesity class 1	Yes	Metabolic syndrome
<i>Gainey, 2016</i> (82)	Mixed	11	63 ± 2	61.1 ± 3.4	26.6 ± 1.4	Pre-obesity	Yes	Type 2 diabetes
		12	58 ± 2	65.8 ± 2.7	27.01 ± 1.4			
<i>Gelinas, 2017</i> (30)	Mixed	24	69 ± 7	NR	27.8 ± 2.8	Pre-obesity	yes	Chronic obstructive pulmonary disease
<i>Gholami, 2020</i> (46)	Mixed	16	53.4 ± 9.1	NR	28.2 ± 2.5	Pre-obesity	Yes	Type 2 diabetes, peripheral neuropathy
<i>Gibbs, 2012</i> (47)	Mixed	3	58.5 ± 5	NR	32.3	Obesity class 1	Yes	Type 2 diabetes
<i>Gliemann, 2020</i> (48)	Female	10	62.3 ± 6.5	74.7 ± 14.2	NR	NR	No	Healthy individuals
<i>Grafe, 2018</i> (36)	Mixed	15	66.1 ± 5.1	87.3 ± 12.8	27.7 ± 3.8	Pre-obesity	Yes	Coronary artery disease
<i>Green, 2014</i> (37)	Mixed	45	41 ± 17	94.7 ± 22.3	28.6 ± 6.3	Pre-obesity	Yes	NR
		45	42 ± 15	86.0 ± 19.1	28.1 ± 5.3			
		47	42 ± 14	84.9 ± 14.4	28.0 ± 3.8			
		45	45 ± 15	80.6 ± 12.7	27.0 ± 3.9			
<i>Greenwood, 2015</i> (50)	Mixed	13	53.9 ± 10.7	76.3 ± 15.6	26.6 ± 4.7	Pre-obesity	Yes	Renal transplant
		13	54.6 ± 10.6	79.4 ± 13.8	28.2 ± 3.6			
<i>Greenwood, 2015</i> (49)	Mixed	16	53.8 ± 13.5	76.5 ± 15.2	27.4 ± 3.52	Pre-obesity	Yes	Chronic kidney disease
<i>Gunnarsson, 2020</i> (51)	Female	8	63.9 ± 5.1	65.8 ± 7.0	25.1 ± 2.9	Pre-obesity	Yes	Hypertension
		9	63.3 ± 6.9	81.1 ± 16.8	28.7 ± 6.2			
<i>Haynes, 2021</i> (52)	Mixed	17	61.9 ± 5.4	72.8 ± 11.5	NR	NR	NR	Healthy individuals
		18	62.2 ± 7.4	77.6 ± 21.1				
<i>Headley, 2014</i>	Mixed	25	58 ± 8	101.7 ± 24.9	34.9 ± 8.0	Obesity class 1	Yes	Chronic kidney disease

(54)								
<i>Hellsten, 2012</i> (38)	Mixed	11	46 ± 1	76.7 ± 2.8	NR	NR	Yes	Hypertension
		10	47 ± 1	80.6 ± 7.7				
<i>Hildreth, 2018</i> (55)	Male	19	66 ± 5	91.3 ± 13.0	28.9 ± 3.4	Pre-obesity	Yes	Hypertension, dyslipidemia
<i>Hotta, 2019</i> (56)	Mixed	15	71 ± 2	92 ± 9.5	33 ± 3.3	Obesity class 1	Yes	Peripheral artery disease
<i>Jaime, 2019</i> (57)	Female	12	64 ± 1	60.3 ± 2.3	24 ± 0.6	Normal weight	NR	Healthy individuals
<i>Kato, 2017</i> (58)	Mixed	25	70 ± 11	NR	22.5 ± 3.3	Normal weight	Yes	Chronic heart failure
<i>Keech, 2020</i> (59)	Mixed	29	54 ± 7	85 ± 23	27.7 ± 7	Pre-obesity	Yes	Coronary artery disease
<i>Kim, 2019</i> (39)	Mixed	10	69.33 ± 2.54	62.13 ± 4.29	NR	NR	Yes	Chronic diseases or metabolic syndrome
<i>Kirkman, 2019</i> (60)	Mixed	16	55 ± 13	NR	30 ± 2	Pre-obesity	Yes	Chronic kidney disease
<i>Klonizakis, 2014</i> (61)	Mixed	7	64 ± 4	63 ± 13.5	NR	NR	Yes	NR
		11	64 ± 7	62.3 ± 6				
<i>Koshiha, 2019</i> (40)	Female	20	60.1 ± 1.6	56.8 ± 1.9	23.4 ± 0.6	Normal weight	NR	NR
<i>Kujawski, 2018</i> (62)	Mixed	27	64 ± NR	NR	26.7 ± 4	Pre-obesity	NR	Healthy individuals
		28	66 ± NR		22.94 ± 4	Normal weight		
<i>Lee, 2019</i> (63)	Female	15	49.1 ± 7.9	80.9 ± 17.7	33.1 ± 7.6	Obesity class 1	Yes	Breast cancer
<i>Lekavich, 2021</i> (65)	Mixed	11	53.1 ± 6.4	90.5 ± 10.4	31.7 ± 3.4	Obesity class 1	NR	Obesity, dyslipidemia
		10	47 ± 12.3	86.5 ± 12.7	29.3 ± 2.3	Pre-obesity	NR	
<i>Luk, 2011</i> (66)	Mixed	32	67.7 ± 9	NR	24.7 ± 2.4	Normal weight	Yes	Healthy individuals
<i>Magalhães, 2019</i> (67)	Mixed	13	58.9 ± 7.5	84.2 ± 19.2	30.2 ± 5.9	Obesity class 1	Yes	Type 2 diabetes
		16	60.4 ± 6.8	82.0 ± 13.8	31.0 ± 5.5			
<i>Munch, 2018</i> (41)	Mixed	6	66 ± 2	77 ± 5	25 ± 2	Normal weight	No	Heart failure

		8	58 ± 4	89 ± 6	29.2 ± 2	Pre-obesity	Yes	
		16	60.4 ± 6.8	82.0 ± 13.8	31.0 ± 5.5	Obesity class 1	Yes	
<i>Munch, 2018</i> (68)	Mixed	14	63 ± 3	87 ± 3	28 ± 1	Pre-obesity	Yes	Heart failure
		12	59 ± 3	89 ± 5	29 ± 1			
<i>Nishiwaki, 2015</i> (28)	Male	8	45 ± 4	69.9 ± 2.2	23.6 ± 0.9	Normal weight	NR	Healthy individuals
<i>Novaković, 2019</i> (69)	Mixed	10	65.1 ± 7.6	NR	30.4 ± 6.2	Obesity class 1	Yes	Peripheral artery disease
		11	65.6 ± 11	NR	27.3 ± 3.3	Pre-obesity		
<i>Nualnim, 2012</i> (70)	Mixed	24	58 ± 2	81 ± 3	29 ± 1	Pre-obesity	No	Healthy individuals
<i>Nyberg, 2016</i> (29)	Female	20	50 ± 0	69.2 ± 1.4	24.4 ± 0.5	Normal weight	NR	Healthy individuals
		16	54 ± 1	64.4 ± 1.8	23.1 ± 0.5			
<i>O'Brien, 2020</i> (71)	Mixed	12	68 ± 5	NR	25.9 ± 3.1	Pre-obesity	Yes	Hypertension, asthmatic, hypothyroidism
		12	68 ± 6	NR	25.2 ± 3.6			
		14	66 ± 7	NR	27.2 ± 5.1			
<i>Park SY, 2020</i> (72)	Mixed	28	60 ± 9	55 ± 7.4	22.8 ± 2.8	Normal weight	Yes	NR
		25	60 ± 10	56.5 ± 5.7	22.5 ± 2.4			
<i>Park S-Y, 2019</i> (73)	Mixed	42	70 ± 10	54.1 ± 7.1	20.4 ± 2.1	Normal weight	Yes	Peripheral artery disease
<i>Park W, 2020</i> (74)	Male	10	69.1 ± 0.9	70.7 ± 3.8	26.2 ± 0.5	Pre-obesity	Yes	Peripheral artery disease
<i>Pierce, 2011</i> (30)	Mixed	26	63 ± 1	73.5 ± 2.9	25.3 ± 0.7	Pre-obesity	Yes	Healthy individuals
<i>Pierce, 2016</i> (31)	Mixed	14	63 ± 1	71 ± 2.6	23.5 ± 0.6	Normal weight	Yes	NR
<i>Schmidt, 2014</i> (76)	Male	9	68 ± 4	77.7 ± 9.4	26.1 ± 3.9	Pre-obesity	NR	Healthy individuals
		9	69.1 ± 3.1	85.8 ± 12	27.4 ± 2.8			
<i>Schreuder, 2014</i> (77)	Mixed	10	57 ± 6	106 ± 18	30.9 ± 4.1	Obesity class 1	Yes	Type 2 diabetes
		9	52 ± 8	115 ± 23	36.0 ± 6.5	Obesity class 2		
<i>Shinno, 2017</i> (78)	Female	11	47.9 ± 2.2	54 ± 11.6	NR	NR	No	Healthy individuals
		11	46.9 ± 3.2	53.6 ± 8.6				
<i>Tanahashi, 2017</i> (32)	Mixed	26	61 ± 7	58.7±7.3	23.1±2.4	Normal weight	NR	Healthy individuals

<i>van Zanten, 2019</i> (33)	Mixed	50	50 ± 10	NR	28.8 ± 1.77	Pre-obesity	Yes	Rheumatoid arthritis
<i>Vinet, 2018</i> (79)	Mixed	17	58.2 ± 3.8	92 ± 13.6	32.8 ± 0.7	Obesity class 1	Yes	Metabolic syndrome
		21	67.7 ± 4.2	85.2 ± 13.1	32.3 ± 13.1			
		24	59.2 ± 5.1	89.4 ± 12	33.7 ± 3.6			
<i>Williams, 2013</i> (80)	Mixed	25	66.9 ± 4.3	78.5 ± 15.6	28.1 ± 4.4	Pre-obesity	Yes	Healthy individuals
		24	66.4 ± 4.3	78.2 ± 15.2	28.0 ± 4.9			
<i>Wong, 2014</i> (81)	Female	15	57 ± 1	87.6 ± 4.1	34.2 ± 1.2	Obesity class 1	NR	Healthy individuals

\* Nutritional status classifications accordingly National Institute of Health (*NIH*) and the World Health Organization (*WHO*) for White, Hispanic, and Black individuals (1). Body mass index (*BMI*); Not reported (*NR*). 1. Weir CB, Jan A. BMI classification percentile and cut-off points. 2019;