

Table 8.3. Approximate quantification of total vessel systems in the human circulatory system. (Using data from [382])

vessel	number	total length (mm)	total surface area (mm ²)	total blood volume (mm ³)
aorta	1	400	31,400	200,000
large arteries	40	8,000	163,000	260,000
main artery branches	500	50,000	377,000	220,000
terminal artery branches	11,000	110,000	415,000	120,000
arterioles	4,500,000	9,000,000	2,800,000	70,000
capillaries	19,000,000,000	19,000,000,000	298,000,000	375,000
venules	10,000,000	20,000,000	9,400,000	355,000
terminal venules	11,000	110,000	518,000	190,000
main venous branches	500	50,000	785,000	1,590,000
large veins	40	8,000	352,000	1,290,000
vena cava ^a	1 ^a	400	37,700	280,000
heart chambers	—			450,000
Total		~19,000 km	312,900,000	5,400,000

This is for a 30-yr-old male, with mass 70 kg and 5.4 L blood volume.

^aThere are really two vena cavae.