

RESEARCH ARTICLE

Additive-manufactured synthetic bone model with biomimicking tunable mechanical properties for evaluation of medical implants

Supplementary File

3D printed specimen

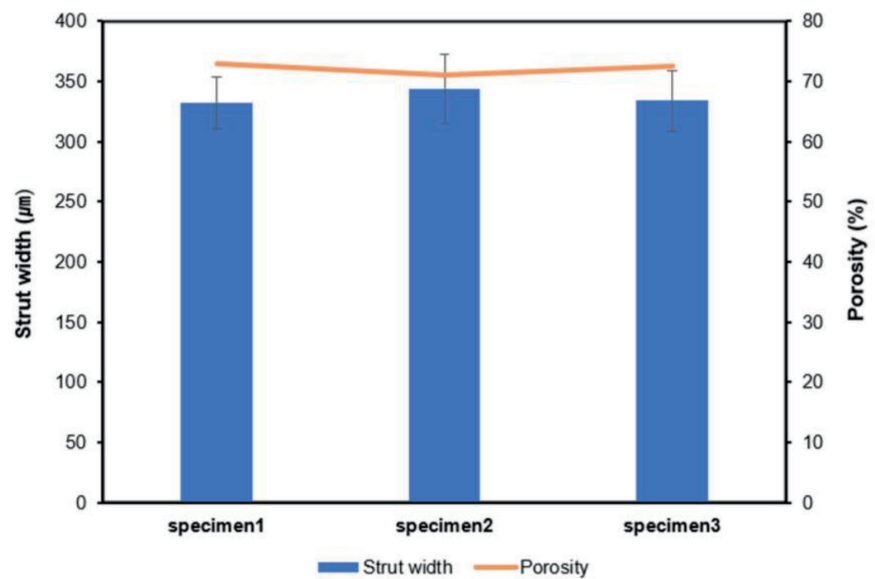
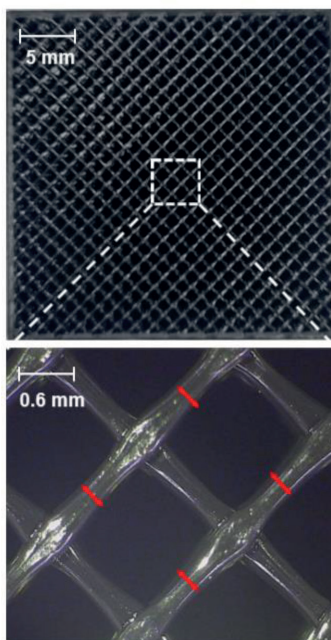


Figure S1. Measured strut width and calculated porosity of printed specimens.

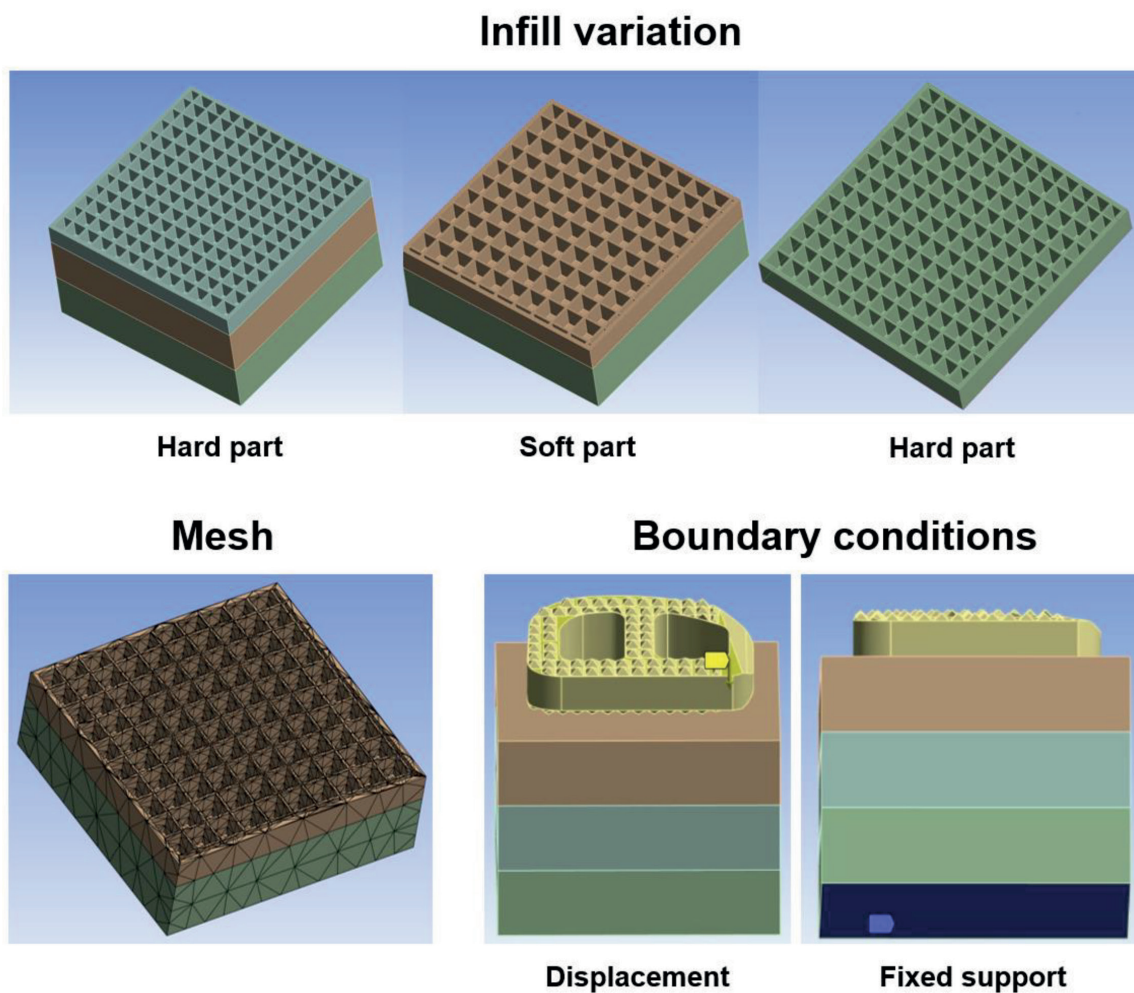


Figure S2. Finite element method (FEM) simulation settings for implant compression of infill-varied structure.

Table S1. Material properties for finite element analysis

	Spinal implant	Infill-varied structure
Young's modulus (GPa)	200	2.90
Poisson's ratio	0.3	0.39

Table S2. Infill variation conditions of cuboid rectangular specimens

	(i)	(ii)	(iii)	(iv)	(v)	(vi)
DH (%)	45	35	25	25	25	25
DS (%)	15	15	15	20	20	20
volS (%)	33	33	33	33	50	67

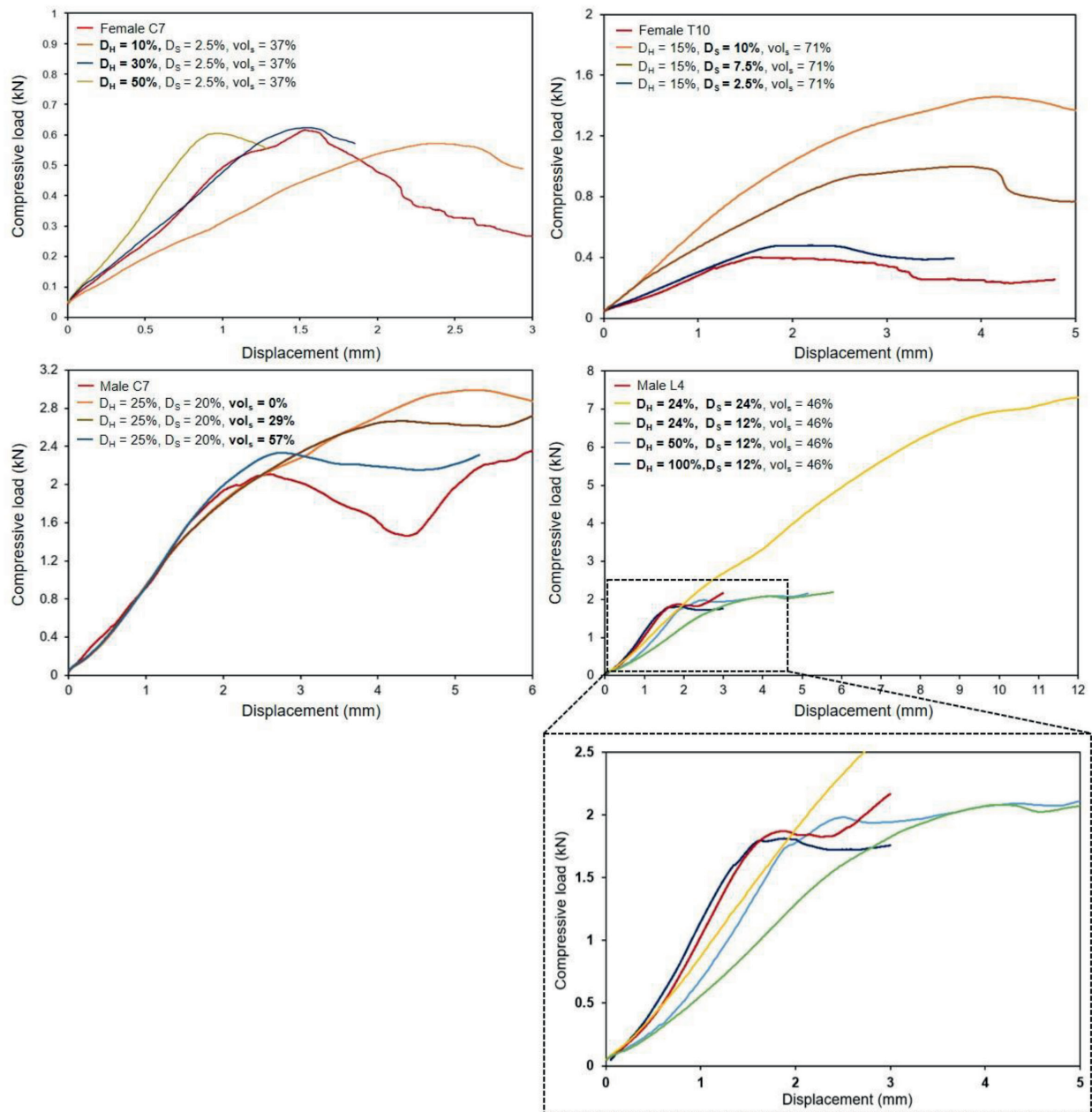


Figure S3. Load–displacement curves for 3D-printed artificial and natural vertebrae.