



Bones

Principal bone cells:

Cell Type	Characteristics	Function
Osteogenic Cells		
Osteoblasts		
Osteocytes		
Osteoclasts		

Fill in your charts and compare them to ours at www.vcc.ca/tlc.



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Types of bone tissue:

Type	Characteristics	Function
Compact		
Spongy		

Practice questions:

- 1) Which bone cells do not originate from osteogenic cells?
- 2) In Paget's disease, the osteoclasts are overactive. What are the implications for a patient's bone structure?
- 3) Osteoporosis thins and weakens bones. To mitigate osteoporosis, it is recommended that one should consume a diet rich in calcium and vitamin D. How does a diet rich in these nutrients diminish the risk of osteoporosis?

Solutions:

- 1) *Osteoclasts – they develop from bone marrow stem cells.*
- 2) *More bone is resorbed than built. Bones become weak and may break easily.*
- 3) *Calcium is necessary for forming hydroxyapatite and building bones; vitamin D helps your intestines absorb calcium from your food. If calcium or vitamin D is deficient, bones become weaker and less dense.*

