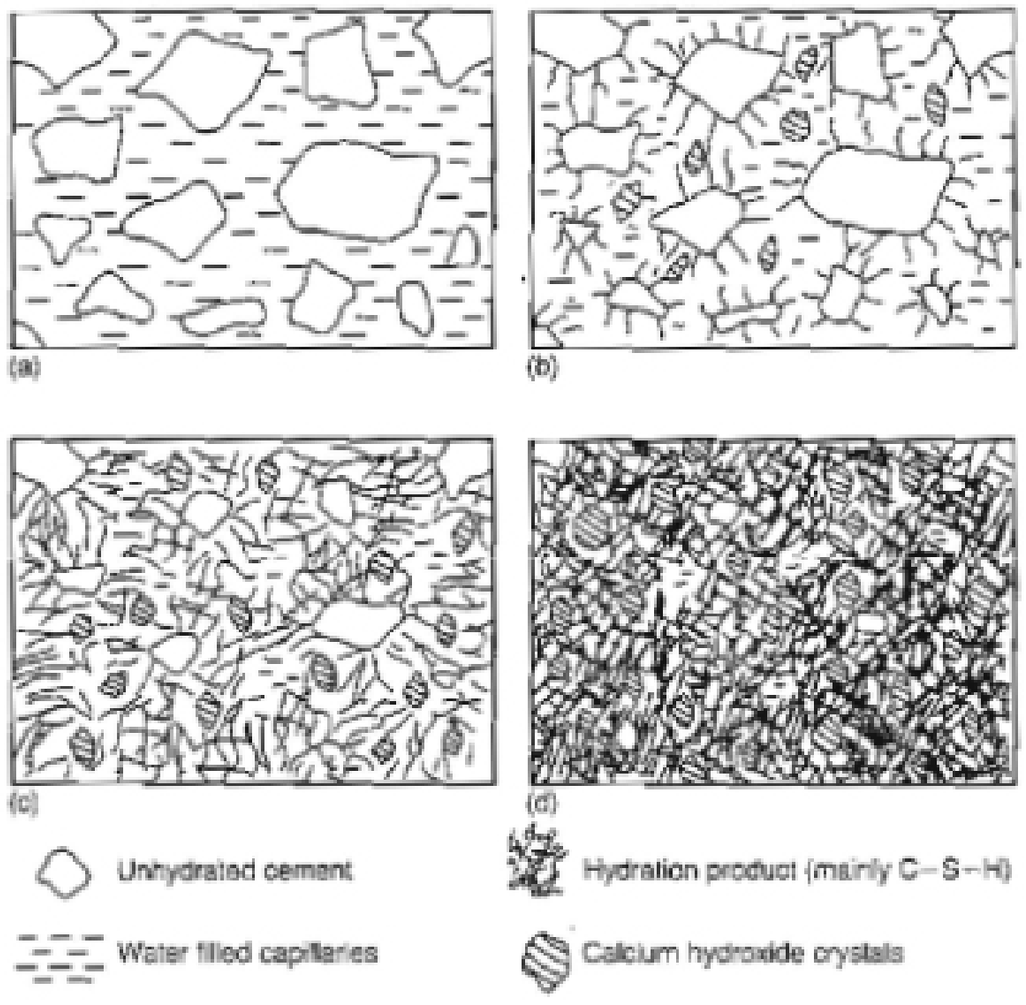
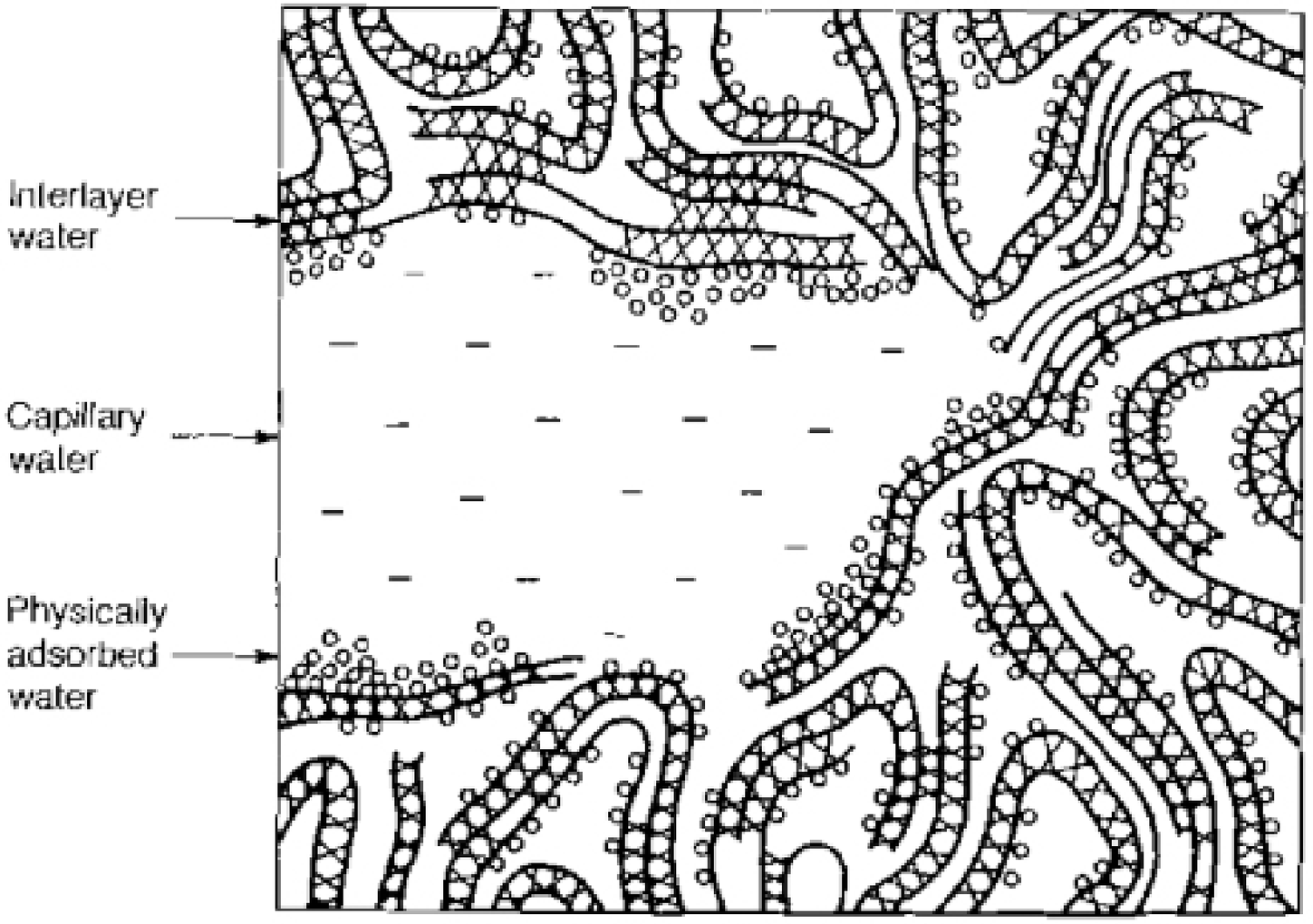
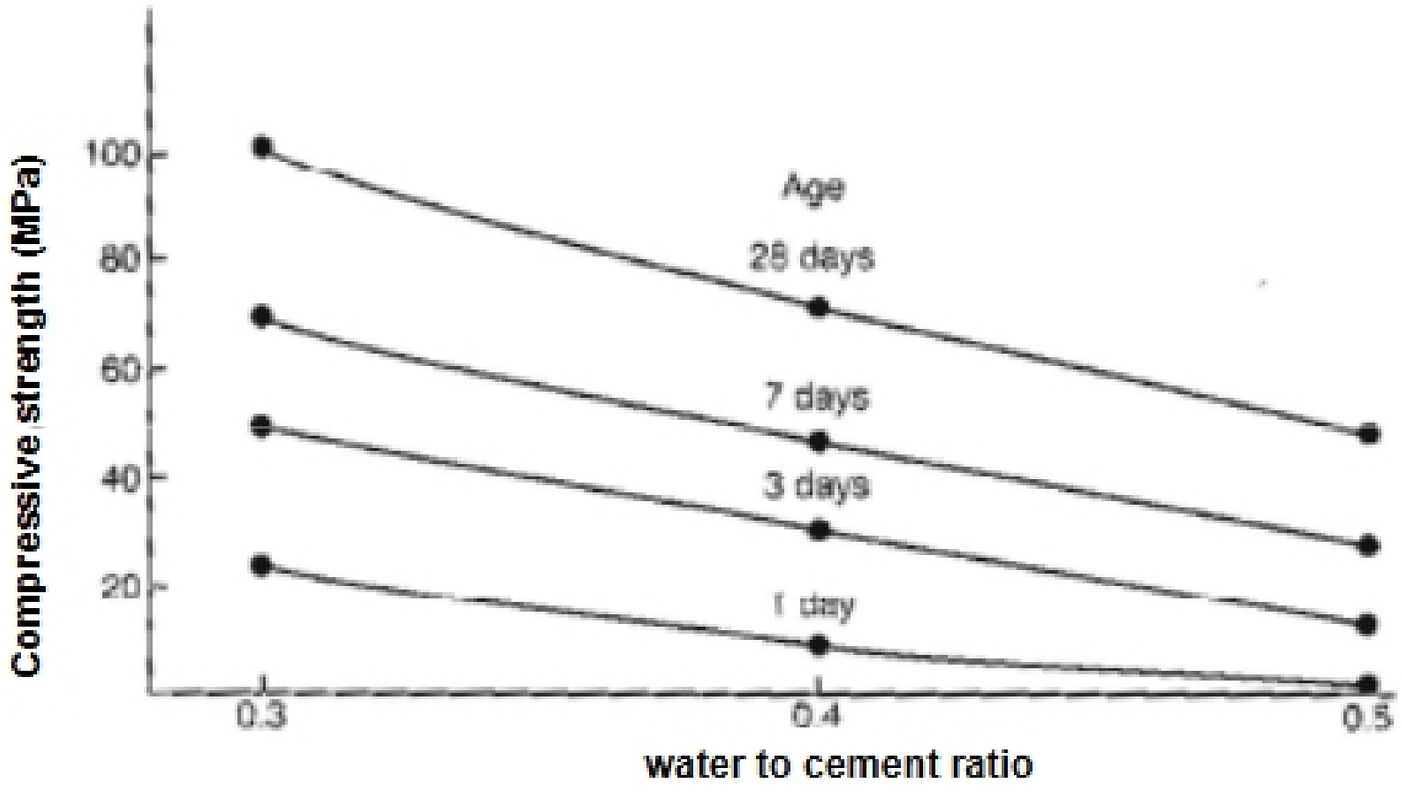


Schematic of the development of microstructure in hydrating cement paste: (a) water and cement comprising fresh cement paste; (b) initial set – interlocking of weak C-S-H products with some $Ca(OH)_2$ crystals; (c) two to three days old – strength from denser C-S-H between unhydrated cement and capillary voids; (d) mature paste – denser C-S-H around $Ca(OH)_2$ crystals, residue of unhydrated cement and capillary voids. (Adapted from Illston, 1996.)



Schematic of forms of water within calcium silicate hydrate (C-S-H). Most strongly bound water is the interlayer water; next is the physically adsorbed water; water in the capillary pores is unbound. (Original figure by Feldman and Sereda, 1970. This figure adapted from Illston, 1996.)



Compressive strength development of hcp in water as function of w/c ratio. (Original data by Domone and Thurairatnam, 1986. Figure adapted from Illston, 1996.)