# Bone growth and scuba diving

**Our 12-year-old daughter has shown a great deal of interest in learning to dive and as a family, we have just experienced an introductory dive at our local dive shop. At our daughter's recent physical exam, her pediatrician expressed some concern for her bone growth and scuba diving. It seems there are many youngsters involved in diving. Should we be concerned for our daughter's growth and development if we decide to allow her to dive?**

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*Answer from DAN experts:*

In general, the concern is focused on the possible formation of micro-bubbles in the bloodstream of all scuba divers. We often call these 'silent bubbles', which fail to produce any detectable symptoms, but are known to be present in the bloodstream of many divers. No one knows to what extent these bubbles could form in younger divers. Theoretically, these bubbles may obstruct blood flow in nutrient vessels to the epiphyseal plates, also called growth plates. This process may cause focal areas of avascular necrosis or angular deformity to the developing weight bearing long bones, particularly the femoral head, distal femur, and proximal tibia. Young divers should stay within the guidelines of the junior divers program. This will limit their exposure to nitrogen, by restricting depth, time and number of dives as well as allowing for maximum surface intervals to promote nitrogen off gassing. Although the concern is theoretical, conservative dive practices are recommended for junior divers.