The fracture of denture base materials usually occurs due to accidental dropping and mishandling of these materials. Repeated fracture of denture base materials could be a problem for denture materials made of acrylic resins due to lack of toughness of PMMA-based denture materials. Use of a material with higher toughness might eliminate this problem. Properties of heat-polymerized poly(methyl methacrylate) (PMMA) and high-impact polyamide denture base biomaterials were compared. The test results showed that polyamide samples were more resilient and tougher. Polyamide biomaterials might be good candidate as an alternative to denture base PMMA materials for clinical situations of repeated fractures.