Minimally invasive dentistry

What is minimally invasive dentistry and how is it different from regular dentistry?
The goal of minimally invasive dentistry, or microdentistry, is to conserve healthy tooth structure. It focuses on prevention, remineralization, and minimal dentist intervention. Using scientific advances, minimally invasive dentistry allows dentists to perform the least amount of dentistry needed while never removing more of the tooth structure than is required to restore teeth to their normal condition. In addition, in minimally invasive dentistry, dentists use long-lasting dental materials that conserve the maximum tooth structure so the need for future repairs is reduced.

How does it work?
First your dentist will evaluate your risk for tooth decay. The presence of bacteria, quality and quantity of saliva, and your diet are all contributors to decay. Your dentist will then use strategies to prevent or reduce your risk for tooth decay. For instance, if you have a high level of oral bacteria, you might be advised to use mouthwash daily, limit the intake of certain carbohydrates, and practice good oral hygiene.

Which techniques are used?
Minimally invasive dentistry techniques include:

- **Remineralization**: Remineralization is the process of restoring minerals. Remineralization can repair the damage created by the demineralization process. Fluoride plays a very important role in remineralization.

- **Air abrasion**: When a tooth cannot be remineralized and decay is present, your dentist may use air abrasion to remove the decay. Air abrasion is used instead of a traditional drill and may not require anesthesia. It resembles microscopic sand blasting and uses a stream of air combined with a super-fine abrasive powder.

- **Sealants**: Usually made of plastic resin, dental sealants protect teeth from bacteria that cause decay. Sealants fit into the grooves and depressions of the tooth and act as a barrier, protecting against acid and plaque. Sealants do not require any cutting of the tooth and can be placed on teeth that might be susceptible for decay at any time.

- **Inlays and onlays**: Usually dentists use crowns to restore a tooth, but inlays and onlays do not require them to remove as much of the tooth structure. Inlays are similar to fillings except that they are custom-made to fit the cavity in your tooth and are typically the same color as the tooth or gold colored. Onlays are used for more substantial reconstruction and also do not require your dentist to remove as much of the tooth as would a crown.

- **Bite splints**: Many people grind their teeth at night. Grinding, or bruxism, may cause serious damage to the teeth, and may require you to need crowns. Grinding, which often begins in your teenage years or early 20s, can be detected and corrected before much damage has been done. Dentists can create bite splints for you to wear at night or during stressful times when most teeth-grinding occurs.

Where can I find a dentist who practices minimally invasive dentistry?
Most dentists use minimally invasive dentistry techniques in their everyday practice. Ask your dentist if he or she uses these techniques.