Overview
A ganglion cyst is a fluid-filled sac that forms as a herniation from a joint capsule or tendon sheath. The sac is attached to the joint or tendon sheath by a "stalk" that allows fluid to move into the pouch from the joint or sheath. The stalk functions as a valve and often limits fluid drainage out of the cyst, allowing the cyst to increase but not decrease in size. In some cases the stalk functions as a two-way valve, allowing fluid to travel in both directions. This can enable the cyst to increase and decrease in size based on activities.

Causes
The exact cause of ganglion cysts is unknown. They are believed to result from weakness of the joint capsule, ligaments or tendon sheath, which may be inherited or may be caused by arthritis, joint inflammation or trauma.

Where They Occur
Ganglion cysts can develop at any joint in the hand or wrist. They are most commonly found at the center of the back of the wrist. They are also commonly found on the palm side of the hand near the base of the fingers and the thumb side of the wrist, and on the back of the finger near the nail.

Symptoms
A ganglion cyst typically forms a firm bump under the skin. The bump may be large and obvious, or it may be very small and felt only with deep pressure. The cyst may increase in size during periods of increased activity, and then decrease in size with rest. Although most cysts do not cause pain, small cysts on the top of the hand can cause pain with wrist extension activities such as yoga or push-ups, and cysts on the palm side of the wrist may press painfully on the radial artery. Cysts in the fingers may cause pain when grasping objects.

Treatment
Not all cysts require treatment. Those that do not cause pain or limited motion can simply be observed - they may go away over time, especially in children. A painful or bothersome cyst can be drained with a needle (called aspiration), and a steroid can then be injected into the capsule or tendon sheath to decrease inflammation and decrease risk of recurrence. A cyst on the palm side of the wrist near the thumb often cannot be aspirated because of its proximity to the radial artery. For recurrent cysts or cysts on the palm side of the wrist or hand, surgical removal may be needed.