

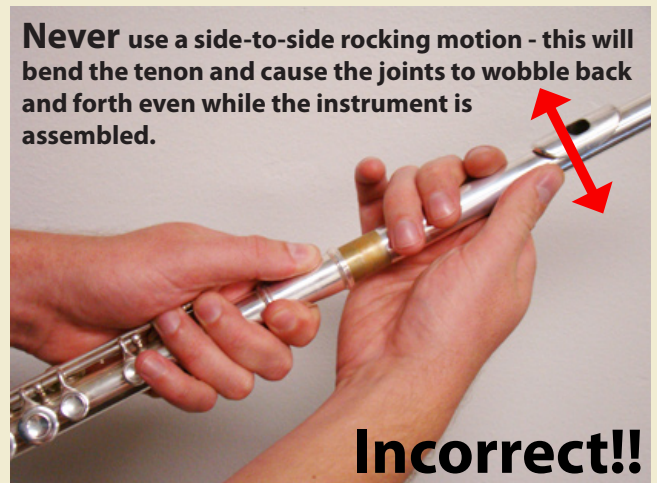
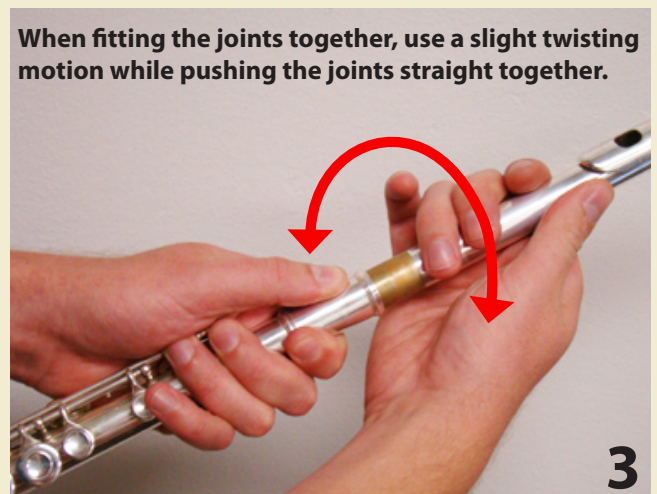
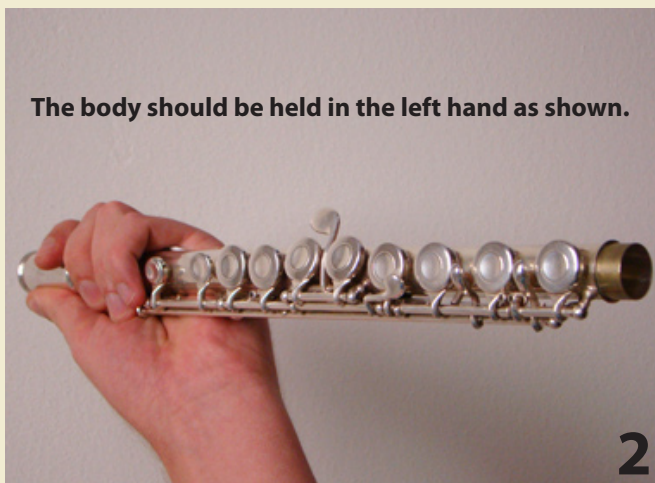
# Flute Care and Maintenance

Flutes are very delicate instruments and go out of adjustment easily, so they require special handling. They also need some regular maintenance to help prolong the life of the pads and corks and to keep the joints fitting together smoothly.

**Never eat or drink anything besides water before or while playing a wind instrument, since sugar and food particles will accumulate inside the instrument and mouthpiece, causing sticky pads and fostering bacteria growth – YUCK!!**

## Assembly

When assembling a flute, it should be handled and assembled in a specific manner to avoid bending keys.



To attach the foot joint, hold the body in the left hand and the foot joint in the right hand as shown, using a slight twisting motion while pushing the joints straight together.



Notice that every effort is made to avoid touching the keys while assembling. The keys on a flute bend so easily that they should only be touched when the instrument is actually being played.

## Maintenance

Since the joints of a flute fit together by means of metal-to-metal contact, it is extremely important to always inspect and clean the tenons and tenon receivers (the tenons are the thin metal sleeves on the head joint and the bottom of the body that fit inside another area called the tenon receiver). If the tenon or tenon receiver gets damaged or dirty, the instrument will become hard to assemble and bent keys will usually result. Bent keys mean leaking pads which in turn means a flute that is hard to play!

Never use any kind of lubricant on the tenons! This includes all types of greases, oils, and graphite powders. Any extra substance coming between the two metal surfaces will only add friction and any liquid lubricant will eventually attract dirt and cause a build up of gunky residue. You can clean the tenons and tenon receivers by wetting a small portion of a clean dry cloth with a solvent or rubbing alcohol, wiping the contact areas thoroughly, and allowing to dry.

Every flutist should swab their instrument before putting it away in the case after playing. When a person plays the flute, warm breath comes in contact with the cooler surface of the inside bore and moisture condenses and forms small droplets. If this moisture is not removed, it will create a high level of humidity inside the case and can drip onto the pads and damage them. When pads become wet and then dry out over and over again, they become hard, their shape gets distorted, and they lose their ability to create a seal on the tone holes, causing leaks.

Every flute should have a cleaning rod inside the case. If you don't have one, they can be purchased at most music stores for a few dollars. This flute rod has a dual purpose: the slotted end allows a cotton handkerchief or other absorbent cloth to be pushed or pulled through the instrument to remove moisture. The other end has a groove around it which is used as a measuring tool to check the placement of the head joint cork. The correct positioning of the head joint cork is essential for the instrument to play in tune. You can check this by inserting the rod into the head joint through the tenon until it touches the head cork and seeing if the notch is centered in the hole in the lip plate. If the notch is too far one way or the other, the cork needs to be adjusted. This should only be done by someone with repair experience. Do not twist the head crown at the closed end of the head joint except to keep it from falling off because it will move the cork inside and the instrument will play out of tune!

Never store anything in the case that will contact the keys such as music or a cleaning cloth. Cases are not designed to accommodate these extra items and forcing the case closed will bend the keys.

Flutes should never be set down on a chair, the floor, a table top, or anywhere else. They should either be in the case, in the player's hands, or on a flute stand.

Some flutes are nickel plated, but most are silver or silver plated. Nickel plating needs very little care to stay shiny. Silver flutes do not need to be shiny to play well but many players make an effort to prevent the silver from tarnishing and turning black. The best way to do this is to wipe the instrument with a pre-treated polishing cloth from time to time. Never use any type of liquid polish! While liquid polishes work great on silverware and jewelry, the liquid can find its way into the key mechanisms and cause serious problems and will also ruin the pads. Polishing cloths are made specifically for silver musical instruments and can be purchased at most music stores.