

**GREAT BAY SPA & SAUNA**  
**275 Constitution Ave.**  
**Portsmouth, NH 03801**  
**800-436-8893**

## **Balancing Spa Water**

**Balanced spa water that is maintained to be clean, healthy, and sparkling clear provides the most enjoyment for your soaking experience and greatly increases the life of your equipment.**

### **The Basics:**

**SANITIZE:** A disinfectant level of 3-5 parts per million (PPM) bromine or chlorine is necessary to continuously kill bacteria. Even if your spa is equipped with an ozonator, you should still use a sanitizer and shock treatment.

**SHOCK:** Shock treatment is best accomplished by the addition of an oxidizer to the water to break down organic contaminants. These contaminants include: dirt, soap films, oils and perspiration. Filters do not always trap these and other very small particles. If they are allowed to remain in the water, they can provide a food source for bacteria and algae. Regular shock treatments will eliminate them.

**pH:** When the mineral components of spa water are in correct proportion to one another, the result is "balanced" water. When balanced the water is neither too alkaline (pH above 7.8) which causes destructive scale buildup on equipment, nor too acidic (pH below 7.2) which will corrode metals and cause costly damage to spa pumps, seals and heaters. Balanced water has a more pleasant feel to the skin, and allows your sanitizer to work more effectively.

**TOTAL ALKALINITY:** Total alkalinity (TA) is also important. It is the measure of all the alkaline material in the water. It is really an indicator of the ability of the water to resist changes in pH. This is known as the water's buffering capacity. The ideal range for TA is 80-100 PPM.

**CALCIUM HARDNESS:** Depending upon where you live, you may have what is commonly referred to as "hard" water: water with high levels of dissolved calcium, or "soft" water with relatively low levels. There is some latitude in acceptable ranges for dissolved calcium. Generally, a range of 150 to 300 PPM (or even somewhat higher) is acceptable.

**Adjusting spa water for proper pH, Total Alkalinity, and Calcium Hardness is very important, but really not that difficult!**

---

## **Balancing Your Water:**

For testing and adjusting your spa water, you should have these basic supplies on hand:

- 3-way test strips
- Water hardness test strips
- **Alka-Rise** (alkalinity increaser)
- **pH Minus** (pH & alkalinity decreaser)
- **pH Plus** (pH increaser)
- **pH Minus** (pH decreaser, pH down or spa acid)
- **Cal-Rise** (Calcium Booster)
- **Perfect pH** (optional)

### **STEP ONE – CALCIUM HARDNESS**

The ideal calcium hardness level for hot tub spas is 200-400 PPM. If your level is below about 150 PPM, some erosion of equipment parts can occur. Low hardness can be corrected with **Cal-Rise**.

### **STEP TWO – TOTAL ALKALINITY**

Always test for total alkalinity (TA) first, using test strips. The acceptable range is 60-180 PPM. If below 60 PPM, add **Alka-Rise** until a reading of about 100-120 PPM is reached. If above 180, add **pH Minus** until a reading of about 120-140 PPM is attained.

### **STEP THREE - pH**

Now check for proper pH level. The acceptable range is 7.2 to 7.8. If below 7.2, add **pH Plus** until a reading of about 7.4 is reached. If the pH is above 7.8, add **pH Minus** until a reading of about 7.6 is reached.

Once pH adjustments have been made, you can lock pH into balance by adding **Perfect pH**. Note: pH holding products are not recommended in areas with high water hardness (above 500 PPM).