

## **The “Great Curative Springs” of Matsunoyama Onsen**

Matsunoyama Onsen is a historic hot spring tucked away in the mountains of Tokamachi. It is considered one of Japan’s “Three Great Curative Springs,” and has reportedly been known for its healing properties since the fourteenth century.

What makes these waters special? Under Japanese law, spring water must have a sufficient concentration of at least 1 out of 19 therapeutic minerals to qualify as a hot spring. Matsunoyama Onsen meets the thresholds for eight, including the highest levels of antifungal and antibacterial boric acid found in Japan. It also contains minerals such as lithium, strontium, bromine, iodine, fluoride, metaboric acid, and metasilicic acid, which are reported to have beneficial properties, especially for skin ailments.

Moreover, the high concentration of these minerals has also been connected to their efficacy. The spring waters of Matsunoyama contain a higher concentration of dissolved minerals than can be found in human cells (a condition called hypertonicity), which aids the absorption of minerals through the natural process of osmosis.

Finally, Matsunoyama Onsen’s springs are very hot, emerging from the ground at up to 98 °C before they are mixed with cold water for bathing. The baths also have high salt content, since they are fed from a reservoir of saltwater that was trapped between two oceanic plates around 12 million years ago. For bathers at Matsunoyama Onsen, the heat and buoyancy of the water make soaking particularly relaxing, which has contributed to the spring’s reputation for healing.