

# Interview with Researchers

Professor Katsuhiro Koyama  
University of Yamanashi  
Graduate School Department  
of Interdisciplinary Research



**Q1**

**Frequently moving around in one's daily life (exercise in the broad sense) is considered important. Would you care to explain why?**

**A1**

Japan is anticipated to go beyond the state of a super-aging society (where the aging rate, which represents the percentage of people 65 years old and over against the total population, exceeds 28%) and reach the aging rate of 29.1% in 2020. It is important in the so-called era of centenarians to live a long healthy life even in our twilight years.

Unfortunately however, the number of people with a physical state requiring long-term care or support due to locomotor system diseases, i.e., problems with muscles, bones, and joints, is rapidly increasing. It has been revealed that these locomotor system diseases can be prevented by regularly using the locomotor system. It is considered vital to get in the habit of being physically active in one's daily life without growing lazy.

**Q2**

**What should I note when moving around (exercising)?**

**A2**

In the beginning, avoid working yourself too hard, but gradually increase the strength, duration, and frequency of exercise. If you try too hard, then reactive oxygen species will be produced within your body, which can damage your body when there are excessive amounts. Particularly during the summer, as we are susceptible to perspiration, we should remember to stay hydrated before, during, and after exercise. Studies have shown that drinking alkali ion water helps reduce damage caused by reactive oxygen species. You can kill two birds with one stone since it also keeps you hydrated.

**Q3**

**Is alkali ion water helpful when doing heavy exercises (e.g., competitive sports, mountain climbing)?**

**A3**

Vigorous movements will inevitably accelerate the generation of reactive oxygen species, overload your body, and cause fatigue. However, it has been reported that drinking alkali ion water during such exercises possibly alleviates fatigue.

In particular, it has been pointed out that alkali ion water serves a useful purpose for reducing muscle fatigue (pain) caused by sports associated with sudden stopping and veering behaviors or when descending a mountain.