

Junior's Growth

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Growing up within Taekwon-do definitely has its advantages and teaches its students valuable lessons both mentally and physically.

Higher Ranking Juniors have become more common place over the last ten years and having them within our organisation will improve the experience, expertise and skill levels of our future seniors in years to come, providing they take care of themselves and their injuries during the growing stages.

To help prevent injuries, an important part of all training sessions is devoted to warming up, stretching and warming down but as in all sports, accidents and injuries do still occur. Because we use our legs and hips such a lot this is the natural place for most injuries to happen.

As we go through the grades the techniques become a little harder and training more intense, all training now requires more effort and therefore stretching and warming up become more important. But even once properly warmed and stretched mind, body and timing must all work together. Some people will trip over their own feet if these three things are not done at the same time. Old injuries or problem areas will require more stretching and warming to stop re-injuring any weaknesses, quite often these old injuries reoccur because the injury was not treated or looked after properly when it first happened.

The Junior member is lucky to have the natural flexibility of the very young, which they all take for granted, but this changes with age and becomes something they really have to work at.

When I started getting injuries after I had warmed up and stretched, I presumed I was just unlucky, (especially since I had trained for a number of years and never had any problems) but I did notice a few others around my age and rank were having problems too. I asked both my own physiotherapist and a Tutor at the School of Physiotherapy (both of which have trained in Taekwon-do) for their opinions on leg and hip injuries of Junior's round the 14-17 ears age group.

Although it seems silly Puberty can take the blame for some of the injuries in this age group. At around this age and stage of growth a lot of changes do happen and rapid growth of 5 to 6 inches in height is common, ligaments, tendons, muscles and bones all have to keep up with each other. Pre- puberty even the bones are slightly flexible and will bend slightly, but as you age the bones get harder and are no longer as flexible.

Growth plates are very important and at puberty they are trying to form and settle and are gradually stiffening into position. These plates are a weak point during the growing stages.

A growth plate is like a dogs bone, it has two fat ends and a long skinny bit in between. The growth plate is where two bones join. The growth plate grows length ways and only the ends expand. If you can picture a balloon and it is expanding, that is what is happening at each end of

the bone. The joints expand like blowing up a balloon, it can swell one day and shrink another day, but all the time growing. This pushes the arteries and muscles out and stretches them to their limit. Therefore it is easier for injuries to happen to both muscles and tendons at this time. Because the muscles and tendons have expanded so much everything has loosened to allow for the growth of the bones, the bones can move around a lot more and can slip out of position, this can be the cause of injuries like fractures, dislocations and breaking.

All bones have some form of growth plate. Some are more susceptible to damage than others. The ones more easily damaged are the long bones like upper arm, lower arm, thigh and shin bones. The lesser stressed bones are the skull and collar bone.

Bones do grow faster than tendons and at times the muscles and tendons do not keep up with the bone. This causes pains in the arms and legs and is commonly known as growing pains. It is like a tent pole growing, the guide rope can't keep up so the rope and peg are under a lot of pressure and the muscles and tendons can tear and snap with any pressure.

In Taekwon-do we do so much jumping and kicking and putting our hips and legs on awkward angles, it is much easier to be injured during the growth stages.

During this very vulnerable age if growth plates are damaged this will cause long term and/or permanent problems. The scarring can cause a decrease in range of movement and be the cause of a joint that is less flexible and the early start of arthritis. E.g. Kicks may not be as high and some movements will become difficult or impossible to do.

Girls in this age group don't have as many injuries as boys, although their growth plates and bones are doing the same things they have a lot more hormone activity which causes ligaments to be more lax. Genetic inheritance and the evolution of structural development means that girls are generally more flexible than boys during and after puberty.

Juniors doing board breaks need to be very careful. Hand techniques will do a lot of damage because of the number of fine bones. The hands are for fine work and are very maneuverable but are also very easy to break and become deformed. The feet and legs are far thicker and designed to take loading and weight so aren't so easily damaged, but sideways pressure will damage as the bones take vertical load not horizontal.

Some Gyms in New Zealand have introduced rules that no members under the age of 16 years are allowed to use the weight equipment. This is so the younger members' bodies are not overstressed or put under any strain during the main stages of growth.

Prevention of injuries during this time means looking seriously at the intensity of training especially at the higher ranks, making sure not to over exercise or over stress the body.