

## **Developing a practical Myoelectric Prosthesis for Children**

Upper limb prostheses are useful prosthetic devices for those with upper limb amputations and deficits. Myoelectric prostheses are becoming widespread, and further development is underway to improve functionality and price.

Many congenital defects are target diseases in children, and these children have no experience of moving their finger joints and elbow joints. Age characteristics of children also present training difficulties. However, for children, we believe that upper limb prostheses will also play a useful role in maturing during the growth period. Examples are acquiring a body image and body balance, acquiring and expanding bilateral hand movements, and promoting brain activity and exercise activities. Prosthesis training for children starts from obtaining positive body image from the use of a cosmetic upper limb prosthesis. When proceeding to the myoelectric prosthesis, normally a child progresses from a single-electrode external parent switch to a two-electrode switch as training progresses. Thus, the ultimate goal of the myoelectric prosthesis is use as an "everyday hand."

## CV

1984 Graduated Fukuoka University Department of Medicine

1988 Graduated Saga Medical School Graduate School

1994 Study in the United States

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1995 On-campus lecturer, Saga University Hospital Department of Surgical

2002 Director, Saga University Hospital Department of Rehabilitation Medicine

2004 Assistant professor , Saga University Hospital

Department of Rehabilitation Medicine

2007 - Clinical Professor of Medicine, Saga University Hospital Department of Rehabilitation  
Medicine

2010 - Director, The Japanese Association of Rehabilitation Medicine

2012 - Chairman, The Japanese Society of Prosthetics and Orthotics

2015 -Women and Health Committee Member, The International Society of Physical and  
Rehabilitation Medicine (ISPRM)

2017 International Soroptimist Ariake Saga 2016 Dream Award

Director, Bone and Joint Japan, Japanese society for Neural Repair and  
Neurorehabilitation and The Japanese Society of Regenerative Medicine and  
Rehabilitation

2018 – President, The 55<sup>th</sup> Annual Meeting of the Japanese Association of Rehabilitation  
Medicine

Awards & Nominating Committee Member, ISPRM