

# Advantages of Augmentative and Alternative Communication use in Individuals with SATB2 Gene Mutation

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## Abstract

This poster will discuss the gene mutation SATB2 associated syndrome and how Augmentative and Alternative Communication (AAC) devices benefit the group. The history of this mutation will be discussed, along with its side effects, dysmorphology and cause. An examination of how using AAC devices facilitates language, increases social communication, and encourages oral language will be provided. Available AAC devices will be provided, along with the research supporting the use of AAC on non-verbal children.

Learner Outcomes:

What is SATB2 gene responsible for?

Describe the common traits of SATB2 associated syndrome.

What is an Augmentative and Alternative Communication Device (AAC)?

Why are AAC devices appropriate for nonverbal populations?

How does an AAC device facilitate language in all areas of life?

## Introduction

**SATB2 Gene:** This gene provides the body instructions for making a protein that aids in controlling the development of specific body systems, specifically development of the head, face and nerve cells. (Snijders Blok, L., Goosen, Y. M., van Haaften, L., van Hulst, K., Fisher, S. E., Brunner, H. G., Egger, J. I., & Kleefstra, T. (2021))

**SATB2 associated syndrome:** Characterized by intellectual disabilities, severe speech problems, dental abnormalities, craniofacial anomalies and behavioral problems. The common features can be described using the SATB2 acronym: speech anomalies, abnormalities of the palate, teeth anomalies, behavioral issues, with onset before age 2. Individuals with SATB2 often have mild to severe intellectual disabilities, their ability to produce oral language is delayed or absent and they may present with overly friendly personalities. The cause of this condition is unknown and rare. (Snijders Blok, L., Goosen, Y. M., van Haaften, L., van Hulst, K., Fisher, S. E., Brunner, H. G., Egger, J. I., & Kleefstra, T. (2021))

## What is Augmentative Alternative Communication?

**Augmentative Alternative Communication (AAC):** communication modalities that include everything other than oral communication, these forms include American Sign Language (ASL), Picture Exchange Communication System (PECS), high tech devices with verbal output, or low-tech devices with paper

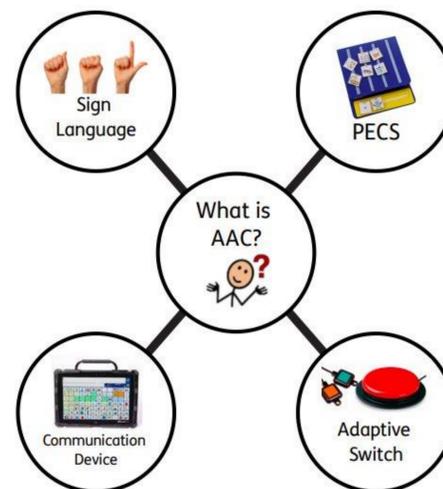
## Benefits of AAC

- Increase in technology means devices are readily available on handheld devices such as an iPad
- Devices are not one size fits all, allowing for optimal communication for everyone
- Allows those with or without oral language a way to communicate daily wants and needs
- Provides continuous verbal models to encourage oral language in all settings

## Types of AAC Programs

- LAMP Words for Life
- Proloquo2Go
- TouchChat
- GoTalk
- Tobii Dynavox
- Eye tracking devices: I-Series and MegaBee Eye Pointing Communication Tablet

Augmentative Alternative Communication



AAC Awareness

## AAC and SATB2

- Due to a large portion of affected individuals being non-verbal, AAC provides a voice for those who would otherwise not have one
- LAMP Words for Life provides affective motor planning to locate words on devices
- Words can be taught in all contexts through models
- Core vocabulary can be customized to needs of each patient and family
- Eye gaze devices can be used for patients with limited lower body movement

## Conclusion

- With the use of AAC, individuals with SATB2 can have an alternative way to communicate
- Family centered practice means devices can be used at home to increase communication
- Patients have a means to advocate for themselves
- AAC is becoming more widely accepted and used for all genetic mutations, including SATB2

## Acknowledgements

