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# Effects of Cochlear Implants on Language Development in School-Age Children

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## INTRODUCTION

This journal self-study course compares language performance in children with and without cochlear implants from preschool to 6th grade. The articles examine levels of language from phonology to prosody, offering insights into areas of strength and weakness as well as clinical directions. The first article examines consonant acquisition patterns based on hearing exposure. The second and third articles compare morphosyntactic, lexical, and phonological awareness profiles, the effect of literacy on each language skill, and types of errors produced in school-age children with and without cochlear implants. The fourth article explores differences in word-learning strategies that could affect lexical development and offers clinical suggestions based on these findings. The final article explores children's abilities to discriminate emotional intent based on suprasegmental characteristics in the speech signal.

## LEARNING OUTCOMES

*You will be able to:*

- describe how profiles of phonological sensitivity, lexical development, and morphosyntactic errors differ between children with cochlear implants and children with normal hearing in elementary school
- summarize the growth of consonant inventories in children with cochlear implants as compared to children with typical hearing
- discuss the effect of hearing status on children's abilities to identify emotional prosody
- describe differences in word-learning strategies in preschoolers with and without cochlear implants

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## CONTENTS

*Consonant Acquisition in Young Cochlear Implant Recipients and Their Typically Developing Peers*, by Suneeti Nathani Iyer, Jongmin Jung, and David J. Ertmer, published in *American Journal of Speech-Language Pathology*..... 15 pages

*Development of Phonological, Lexical, and Syntactic Abilities in Children With Cochlear Implants Across the Elementary Grades*, by Susan Nittrouer, Meganne Muir, Kierstyn Tietgens, Aaron C. Moberly, and Joanna H. Lowenstein, published in *Journal of Speech, Language, and Hearing Research*..... 17 pages

*Development of Grammatical Accuracy in English-Speaking Children With Cochlear Implants: A Longitudinal Study*, by Ling-Yu Guo and Linda J. Spencer, published in *Journal of Speech, Language, and Hearing Research* .... 14 pages

*Pairing New Words With Unfamiliar Objects: Comparing Children With and Without Cochlear Implants*, by Emily Lund, published in *Journal of Speech, Language, and Hearing Research*..... 12 pages

*Vocal Emotion Identification by Children Using Cochlear Implants, Relations to Voice Quality, and Musical Interests*, by Teija Waaramaa, Tarja Kukkonen, Sari Mykkänen and Ahmed Geneid, published in *Journal of Speech, Language, and Hearing Research*..... 13 pages

## PROGRAM HISTORY and IMPORTANT INFORMATION

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Articles originally published in ASHA's scholarly journals

**Start date:** September 9, 2019

**End date:** September 9, 2022

To earn continuing education credit, you must complete the test with a passing score on or before **September 9, 2022**.

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This course is offered for 0.6 ASHA CEUs (Intermediate level, Professional area).