

**STUDY PROTOCOL**

# A prospective, longitudinal study of growth, nutrition and sedentary behaviour in young children with cerebral palsy

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## Abstract

**Background:** Cerebral palsy is the most common cause of physical disability in childhood, occurring in one in 500 children. It is caused by a static brain lesion in the neonatal period leading to a range of activity limitations. Oral motor and swallowing dysfunction, poor nutritional status and poor growth are reported frequently in young children with cerebral palsy and may impact detrimentally on physical and cognitive development, health care utilisation, participation and quality of life in later childhood. The impact of modifiable factors (dietary intake and physical activity) on growth, nutritional status, and body composition (taking into account motor severity) in this population is poorly understood. This study aims to investigate the relationship between a range of factors - linear growth, body composition, oral motor and feeding dysfunction, dietary intake, and time spent sedentary (adjusting for motor severity) - and health outcomes, health care utilisation, participation and quality of life in young children with cerebral palsy (from corrected age of 18 months to 5 years).

**Design/Methods:** This prospective, longitudinal, population-based study aims to recruit a total of 240 young children with cerebral palsy born in Queensland, Australia between 1<sup>st</sup> September 2006 and 31<sup>st</sup> December 2009 (80 from each birth year). Data collection will occur at three time points for each child: 17 - 25 months corrected age, 36 ± 1 months and 60 ± 1 months. Outcomes to be assessed include linear growth, body weight, body composition, dietary intake, oral motor function and feeding ability, time spent sedentary, participation, medical resource use and quality of life.

**Discussion:** This protocol describes a study that will provide the first longitudinal description of the relationship between functional attainment and modifiable lifestyle factors (dietary intake and habitual time spent sedentary) and their impact on the growth, body composition and nutritional status of young children with cerebral palsy across all levels of functional ability.

## Background

Cerebral palsy (CP) is the most common cause of physical disability in childhood occurring in 1 in 500 children [1]. It is a group of permanent disorders of movement and posture, causing activity limitation, that are attributed to non-progressive disturbances that occurred in the developing foetal or infant brain [2]. Damage to the structure of the brain is static and permanent; however, the consequent symptoms are variable and may change over time [2]. In addition to disordered movement or posture, chil-

dren may have a range of associated disabilities, including intellectual disability, hearing and visual deficits, nutrition, feeding and swallowing problems, respiratory infections and epilepsy [1]. Cerebral palsy has substantial life long effects on daily function and quality of life (QOL) for children and their families with an estimated economic cost of over AUD \$115,000 per person per annum [3].

### Growth and nutritional status of children with CP

Poor growth and nutritional status are commonly reported in children with CP [4,5]. Conversely, there is evidence to suggest that certain children with CP are at risk of obesity, particularly those with marked spasticity and who are relatively inactive [6]. Poor growth is frequently considered a 'normal', untreatable side-effect of

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# Growth And Change Of Schizophrenic Children A Longitudinal Study

**Albert A Gayle**



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bemoaned the fact that there was a virtual absence of meaningful interchange between clinical investigators in child psychiatry and their colleagues in the neurosciences We believed that an edited book appealing to clinicians and basic scientists could serve as an initial effort to foster interchange between them The editors wish to emphasize that this book is viewed as only a beginning in the process of interchange that must take place      **Psychopharmacology Child Adol** Alan S. Weiner,1977-08-09      **American Handbook of Psychiatry: Child and adolescent psychiatry, sociocultural and community psychiatry** Silvano Arieti,1974

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## **Table of Contents Growth And Change Of Schizophrenic Children A Longitudinal Study**

1. Understanding the eBook Growth And Change Of Schizophrenic Children A Longitudinal Study
  - The Rise of Digital Reading Growth And Change Of Schizophrenic Children A Longitudinal Study
  - Advantages of eBooks Over Traditional Books
2. Identifying Growth And Change Of Schizophrenic Children A Longitudinal Study
  - Exploring Different Genres
  - Considering Fiction vs. Non-Fiction
  - Determining Your Reading Goals
3. Choosing the Right eBook Platform
  - Popular eBook Platforms
  - Features to Look for in an Growth And Change Of Schizophrenic Children A Longitudinal Study
  - User-Friendly Interface
4. Exploring eBook Recommendations from Growth And Change Of Schizophrenic Children A Longitudinal Study

- Personalized Recommendations
- Growth And Change Of Schizophrenic Children A Longitudinal Study User Reviews and Ratings
- Growth And Change Of Schizophrenic Children A Longitudinal Study and Bestseller Lists
- 5. Accessing Growth And Change Of Schizophrenic Children A Longitudinal Study Free and Paid eBooks
  - Growth And Change Of Schizophrenic Children A Longitudinal Study Public Domain eBooks
  - Growth And Change Of Schizophrenic Children A Longitudinal Study eBook Subscription Services
  - Growth And Change Of Schizophrenic Children A Longitudinal Study Budget-Friendly Options
- 6. Navigating Growth And Change Of Schizophrenic Children A Longitudinal Study eBook Formats
  - ePub, PDF, MOBI, and More
  - Growth And Change Of Schizophrenic Children A Longitudinal Study Compatibility with Devices
  - Growth And Change Of Schizophrenic Children A Longitudinal Study Enhanced eBook Features
- 7. Enhancing Your Reading Experience
  - Adjustable Fonts and Text Sizes of Growth And Change Of Schizophrenic Children A Longitudinal Study
  - Highlighting and Note-Taking Growth And Change Of Schizophrenic Children A Longitudinal Study
  - Interactive Elements Growth And Change Of Schizophrenic Children A Longitudinal Study
- 8. Staying Engaged with Growth And Change Of Schizophrenic Children A Longitudinal Study
  - Joining Online Reading Communities
  - Participating in Virtual Book Clubs
  - Following Authors and Publishers Growth And Change Of Schizophrenic Children A Longitudinal Study
- 9. Balancing eBooks and Physical Books Growth And Change Of Schizophrenic Children A Longitudinal Study
  - Benefits of a Digital Library
  - Creating a Diverse Reading Collection Growth And Change Of Schizophrenic Children A Longitudinal Study
- 10. Overcoming Reading Challenges
  - Dealing with Digital Eye Strain
  - Minimizing Distractions
  - Managing Screen Time
- 11. Cultivating a Reading Routine Growth And Change Of Schizophrenic Children A Longitudinal Study
  - Setting Reading Goals Growth And Change Of Schizophrenic Children A Longitudinal Study
  - Carving Out Dedicated Reading Time
- 12. Sourcing Reliable Information of Growth And Change Of Schizophrenic Children A Longitudinal Study

- Fact-Checking eBook Content of Growth And Change Of Schizophrenic Children A Longitudinal Study
- Distinguishing Credible Sources

### **13. Promoting Lifelong Learning**

- Utilizing eBooks for Skill Development
- Exploring Educational eBooks

### **14. Embracing eBook Trends**

- Integration of Multimedia Elements
- Interactive and Gamified eBooks

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