Peninsula Cerebra Research Unit
PenCRU Childhood Disability Research

What's the Evidence?

Conductive Education for children with cerebral palsy and other neurodisability

Key findings

- Conductive Education (CE) targets a range of academic, social, communication and movement abilities.
- CE has spread worldwide and is now delivered in different ways from the original programme, and varies between settings.
- There is currently insufficient evidence from research to inform whether CE is any more effective in improving function than other approaches.
- A lack of sufficient evidence does not mean that CE is ineffective. Research evidence is one of several factors that should be considered when deciding whether to use particular approaches.

PLEASE NOTE: This summary was produced more than 4 years ago. Information provided may be out of date. If you think it would be helpful to update this summary please contact us at pencru@exeter.ac.uk

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What were we asked?

We were asked whether there was any evidence that Conductive Education is effective to improve functioning for children with Cerebral Palsy and Brain Injury and Motor Disorders.

What did we find?

Conductive Education (CE) was originally developed at the Peto Institute in Hungary in the 1940s. It is based on an educational rather than medical model of intervention, and targets a range of academic, social, communication and movement abilities. 'Conductors' in traditional CE programmes take on the roles of both teacher and therapist. Features of the programme include group work using a highly structured framework; activities broken down into series of tasks; associating rhythms and songs alongside activities; and using equipment such as wooden slatted beds and ladder-back chairs that the child can grasp to assist with learning and doing movements. The programme was delivered intensively in residential settings and the apparently positive results to improve functioning received much publicity.

In the original development of the Peto programme, it is likely that there were selection criteria regarding who was eligible for CE and who was not admitted

for this intervention. If, for example, children had to be able to demonstrate some basic motor skills before starting the programme, then factors like children's age and movement ability, what we now call their GMFCS level, might have played an important role in determining who received CE, and have influenced the changes that were seen over time.

Since spreading worldwide, CE is now delivered in different ways from the original programme, and varies between settings. This variability makes it difficult to define the intervention precisely, and in turn this makes it difficult to evaluate its effectiveness. In addition, as with so many intervention approaches for young people with conditions like cerebral palsy, there has been a huge degree of variation in the way research has been carried out, what 'outcomes' have been assessed, and how good the measurement tools have been that were used to assess those outcomes.

Systematic reviews provide a comprehensive and unbiased summary overview of the research on a topic by bringing together the results of all studies addressing a particular research question. Two systematic reviews have examined the evidence for CE (published in 2004, 2010).

Both reviews reported that there is currently insufficient evidence from research to inform whether CE is any more effective in improving function than other approaches.[1, 2] A further review which brought together the evidence reported in these earlier reviews rated the current quality of the evidence for CE as low. [3]

What do we think?

A lack of sufficient evidence does not mean that CE is ineffective; it simply tells us that research evidence is not conclusive, due to contradictory findings, methodological flaws of the research, and the highly complex nature of the intervention. Research evidence is one of several factors that should be considered when deciding whether to use particular approaches. Other factors include personal preferences, availability and resources. A parent whose child attends CE advises from experience that CE "does require a lot of dedication and participation from parents, to practice the exercises on a daily basis at home and take part in the sessions".

Signposts to other information

Capability Scotland has a factsheet on the use of Conductive Education in Britain

We would like to hear your feedback on this summary – please email us at pencru@exeter.ac.uk if you have any comments or questions.

References

1 Darrah, J. et al. (2004) Conductive education intervention for children with cerebral palsy: an AACPDM evidence report. *Dev Med Child Neurol* 46: 187–203. Available here

2 Tuersley-Dixon, L. & Frederickson, N. (2010) Conductive education: appraising the evidence. *Educ Psychol Pract.* 26: 353–73. Available here

3 Novak, I. et al. (2013) A systematic review of interventions for children with cerebral palsy: state of the evidence. *Developmental Medicine & Child Neurology,* 55: 885–910. Available here

Note: the views expressed here are those of the Peninsula Cerebra Research Unit (PenCRU) at the University of Exeter Medical School and do not represent the views of the Cerebra charity, or any other parties mentioned. We strongly recommend seeking medical advice before undertaking any treatments/therapies not prescribed within the NHS