



## From the Research on Electrophoretical Mobility of Nuclei in Twins

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**Abstract.** I studied 8 pairs of male twins and 14 pairs of female twins. The aim of this paper is to demonstrate the evaluation of development age in pairs of twins examined through the electrophoretical mobility of nuclei. EMN index in pairs of male twins, the index figures do not change dramatically between the ages of 8 – 12. EMN index in pairs of female twins rises from 9 – year – old to 11 – year – old pair. In this paper I want to indicate the studies on development age, which began at The Twins Festival in Szczecin in 1998.

**Key words:** Electrophoretical mobility of nuclei (EMN), (Index)

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### INTRODUCTION

Studies on twins are widely discussed in publications covering most fields of science in accordance with the aspects of their studies. The available data is, however, diverse often due to developing new research techniques allowing better comprehension of the studied material. Such is the case of contrasting analysis of development age by applying the new, less common method of measurement of electrophoretical mobility of nuclei.

The aim of this paper is to demonstrate the evaluation of development age in pairs of twins examined through the electrophoretical mobility of nuclei.

### MATERIAL AND METHOD

To evaluate the rate of mobility of nuclei I used the Biotest apparatus. This method is illustrated in detail in the projects by Czapla [1] and Wawrzyniak [2]. The method is realised by applying AC magnetic field of 20-30 V, amperage of 0.1 mA and frequency of 1-2 Hz to one hundred examined nuclei. In this examination I used samples of layer of mouth cavity tissue as they are easy to obtain. I used the material gathered at The Twins Festival in Szczecin in August 1998. I collected samples of layer of mouth cavity tissue

from 8 pairs of male twins and 14 pairs of female twins. All tested pairs were of single sex aged between 8 and 49 years old. I established the electrophoretical mobility of nuclei index (EMN) in each individual. The results shown in the diagrams indicate the link between the EMN index and the calendar age, as well as the discrepancies between the particular twins in each pair.

## MATERIAL ANALYSIS

As shown in diagram 1, which presents the EMN index in pairs of male twins, the index figures do not change dramatically between the ages of 8-12. The differences between the twins are insignificant. The pairs of 13-, 16-, 19-year-olds show bigger differences. This might be the result of the ontogenetic changes of that stage. The oldest pair of 49-year-old twins shares almost identical EMN index. Diagram 2 shows the EMN index in pairs of female twins. The index rises from 9-year-old to 11-year-old pair. The pairs aged 12 and 31 indicate substantially lower index.

It is important to stress that the differences between the EMN index within particular pairs reach from 2 to 13 units among male twins and from 1 to 13 among female twins. The discrepancies are minor and do not depend on the sequence of birth.

In this paper we want to indicate the studies on development age, which began at The Twins Festival in Szczecin in 1998.

The outcome of the experiment is still too scarce to allow any further conclusions apart from the fact that the subject is interesting. Thus we will continue with our studies.

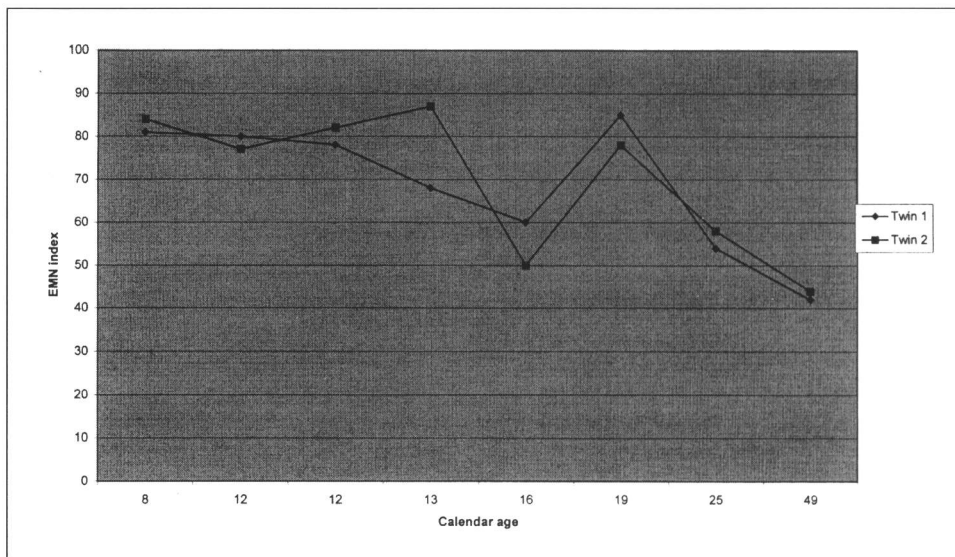


Diagram 1 - The electrophoretical mobility of nuclei index (EMN) in pairs of male twins.

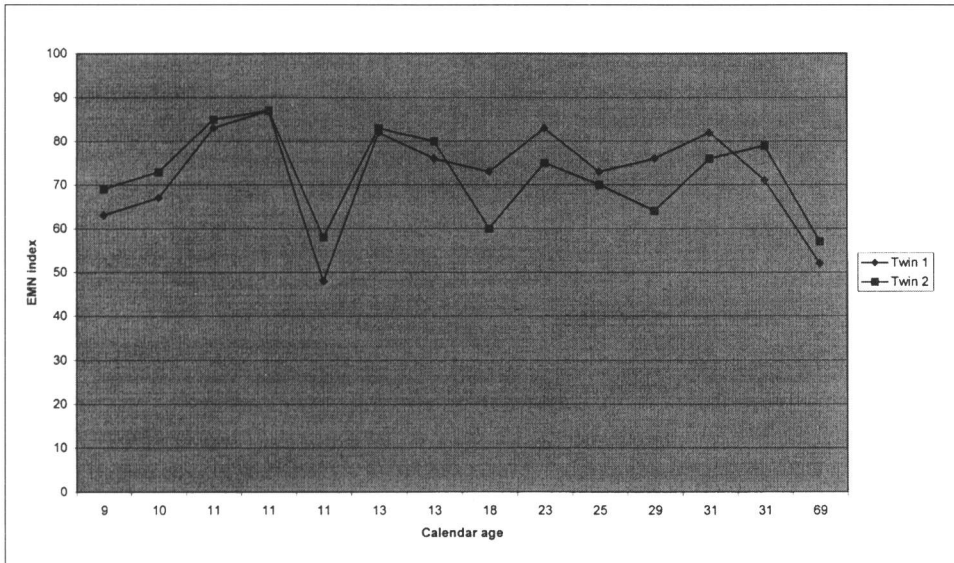


Diagram 2 - The electrophoretical mobility of nuclei index (EMN) in pairs of female twins.

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