

# Effect of intrauterine development and nutritional status on perinatal, intrauterine and neonatal mortality

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**Objective:** To study the influence of intrauterine bodily development and nutritional status on perinatal, intrauterine and neonatal mortality. **Methods:** The authors have developed a new method, the MDN system (MDN: Maturity, Development, Nutritional Status) to determine the development and nutritional status of newborns on the basis of their weight and length standard positions. Using data of 680 947 neonates born in the 7 years from 1997 to 2003 in Hungary, they computed the perinatal (PM), intrauterine (IUM) and 1-28 days neonatal mortality (NM) rate of each developmental groups of neonates. **Results:** In this period the PM was 8,9‰ (IUM 5.3‰, NM 5.1‰) in Hungary. The PM was 7‰ (IUM and the NM were 4‰) in the group of absolute average development as well, but the PM was 30‰ (IUM 14‰, 20‰) in the proportionally restricted, and 191‰ (IUM 78‰, NM 124‰) in the extremely undernourished (extremely disproportionally restricted) groups. We have found similar tendency in mature and premature groups also. **Conclusions:** Both bodily development and nourishment have a major impact on perinatal (intrauterine and neonatal) mortality. Most endangered are the extremely disproportional restricted fetuses and neonates. The MDN system is a suitable method to differentiate the most endangered groups of neonates on the basis of their development and nutritional status.