

The Special Needs of Preterm Children – An Oral Health Perspective



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KEYWORDS

• Preterm • Low birthweight • Children • Dental • Oral health • Teeth • Malocclusion

KEY POINTS

- Preterm low birthweight children are at higher risks of orodental anomalies and acquired oral conditions.
- Oral health care for preterm children should commence as early as possible to enable early risk assessment, detection, and management of orodental anomalies and prevention of acquired oral conditions, through the establishment of a dental home.
- Parents and carers of preterm children need to be provided with timely advice and support regarding oral health in the context of general health, growth, and well-being; these are best achieved interprofessionally, with the help of non-dental health practitioners, to enable reinforcement.

INTRODUCTION

Preterm birth is defined by the World Health Organization as “a birth that occurs before 37 completed weeks of gestation or less than 259 days since the first day of the mothers’ last menstrual period” (Table 1).¹ The current incidence is estimated to be 11% globally and the prevalence is increasing.^{2–4} It has been estimated that approximately 15 million preterm births occur each year globally and, of these, more than 80% are classified as premature births and the rest as very premature or extremely premature births (see Table 1).⁵ More male infants are born premature than female infants.^{1,5,6} Male preterm infants have higher mortality and morbidity than female preterm infants.^{5,6}

The morbidity and mortality rates of preterm births increase with decreasing gestational ages.¹ Infants born before or at 25 weeks are at highest risks of severe lifelong

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Gestational Age	<28 wk	Extremely premature
	28 to <32 wk	Very premature
	32 to <37 wk	Premature
Birthweight	<2500 g	Low birthweight
	<1500 g	Very low birthweight
	<1000 g	Extremely low birthweight

Data from World Health Organization (WHO). International statistical classification of diseases and related health problems: instruction manual. Geneva (Switzerland): World Health Organization; 2004; and World Health Organization (WHO). Born too soon; the global action report on preterm birth. Geneva (Switzerland): World Health Organization; 2012.

impairment and have the lowest survival rates (Fig. 1).¹ In addition to gestational age, morbidity and mortality also increase with decreasing birthweights (see Table 1).⁷ Most common causes for mortality among low birthweight and very-low-birthweight infants are prematurity and intrauterine growth restriction.⁸ Infants born very or extremely premature with low birthweight, very low birthweight, or extremely low birthweight have higher mortality and morbidity risks than infants born small for gestational age at term.⁵

Short-term and long term morbidities that occur among preterm infants vary enormously (Box 1). Frequently, morbidities are related to the immaturity of their organs and complications as a result of concurrent medical conditions and/or interventions.^{8,9} Regardless of severity of prematurity or low birthweight, preterm infants are reported to have increased risk of short-term and long-term complications, including cerebral palsy, compromised neurodevelopmental outcomes, and chronic medical needs compared with their full-term counterparts (see Box 1).^{5,7-14}

Effects of preterm birth on oral structures vary from infant to infant, depending on several factors, including gestational age, birthweight, postnatal medical complications and interventions, and growth and developmental complications (Box 2).^{10,15,16} The risks of certain orodental manifestations are higher among preterm infants compared with full-term infants.^{10,15,16}

COMMON ADVERSE EFFECTS ON THE ORODENTAL STRUCTURES AMONG PRETERM INFANTS

Developmental Enamel Defects

The prevalence of developmental enamel defects may be as high as 96% among infants born preterm and/or very low birthweight and extremely low birthweight.^{15,17-21}



Fig. 1. Preterm infant, born at 25 weeks, with oral intubation.

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