

## THE RELATIONSHIP BETWEEN ORAL HEALTH AND SYSTEMIC HEALTH IS NOT WELL UNDERSTOOD

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Why has oral health received so little attention within the health system over the past two decades? Is it because the pre-1960s era, when tooth loss was considered inevitable, was followed in the 1970s by the advent of water fluoridation and the perception that fluoridation ensured good oral health? Or does the fact that approximately 80 per cent of oral health care is provided by the private oral health sector promote a perception that the public health care system needs only to provide water fluoridation and a restricted welfare service?

The effects of oral neglect and oro-dental disease continue to manifest themselves as severely debilitating chronic conditions with the potential for long-term adverse health, social and economic consequences for a significant and growing number of people. The 1992 National Health Strategy and the 1998 Senate Inquiry into Public Dental Services both identified the extent of oral disease and the need for access to oral health care as an important community issue.<sup>1,2</sup> The 1995 Australian *National Health Survey* found that oral disease was the sixth most frequent illness condition,<sup>3</sup> with more than one million people visiting a dentist in the two weeks prior to the survey. In 1998, the Australian Institute of Health and Welfare reported a cost-of-illness analysis for dental services in 1993–1994 of almost \$1.8 billion, or six per cent of the total health budget.<sup>4</sup> That included \$0.5 billion in costs to NSW alone.

Further, like so many other health indicators, the burden of oral disease is shared disproportionately by such disadvantaged groups as refugees, the home-bound, aged, and homeless youth. Oro-dental diseases are predominantly lifestyle diseases and, as Kickbusch recognised in 1989, 'Lifestyle diseases are no longer diseases of

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affluence but an unnecessary burden on the disadvantaged'.<sup>5</sup>

Of growing interest is the evidence suggesting a direct relationship between oral health and diseases such as cardiovascular disease and diabetes. This is potentially of great public health significance, as oro-dental disease is largely preventable, and in many instances readily treatable. If oral health is to be recognised within the broader health system as having an important part to play in improving the health of our community, it is imperative that this relationship between oral health and other diseases be examined more closely.

To this end, and beginning with this edition of the *Public Health Bulletin*, a series of articles will examine current and emerging issues in oral health. These issues are both exciting and challenging, not only for the oral health profession, but also for medical and public health professionals. Over four issues, the *Bulletin* will examine topics such as the oral manifestations of child neglect; the influence of oral health on the general health of the aged and those with special needs; oral carcinoma; and the impact of HIV–AIDS on oral health. The future workforce required to meet the changing patterns of disease resulting from our aging population; the economic

impact of oral disease; and research trends will also be explored.

This edition highlights two important areas. The first article examines the relationship between periodontal disease and systemic health, with particular reference to pregnancy, diabetes and cardiovascular disease. The second explores the impact on oral health of xerostomia (dry mouth), the most common cause of which is medication.

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## PERIODONTAL DISEASES AND SYSTEMIC HEALTH: ASSOCIATIONS, DIRECTIONS, IMPLICATIONS

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Recent findings that suggest that periodontal disease may be an independent risk factor for a number of significant systemic diseases, including cardiovascular diseases, are so important that they have been referred to as ‘the inversion of a paradigm’.<sup>1</sup> While it is well known that a number of diseases and normal physiological states are associated with an increase in the risk of periodontal disease, until now we have not recognised that the chronic infection and ulceration in periodontal disease could affect systemic health beyond certain limited and well-defined instances, such as bacterial endocarditis. This article describes the association between periodontal disease and systemic health, in particular the evidence for an effect in pregnancy, diabetes and cardiovascular disease; and the implications of this for public health.

### THE PERIODONTAL DISEASES

The periodontal diseases are a family of chronic inflammatory diseases, including gingivitis and periodontitis, that involve the periodontium (the bone and soft tissues that support the teeth in the jaws). Gingivitis, an inflammation of the gums, is a very common condition. Periodontitis is also common and is a more severe condition that causes loss of bone that supports the teeth. It afflicts 15 to 20 per cent of the adult dentate (people with their natural teeth) population in Australia.<sup>2</sup> Research over the last 30 years has described the role of bacterial plaque in causing periodontal disease, and controlled clinical trials suggest that periodontal treatment (such as scaling and cleaning of teeth) usually stabilises the condition and improves periodontal health.<sup>3,4</sup> Thus, periodontal management, with an emphasis on bacterial plaque control, is an evidence-based intervention with established health outcomes.

A wide range of systemic conditions, ranging from the hormonal changes of puberty and pregnancy to disease