

### **The Chalky Teeth Campaign: converting medico-dental science into fewer cavities**

Since launching in 2013, The D3 Group's "Chalky Teeth Campaign" has dramatically increased worldwide awareness of public-health opportunities surrounding Molar Hypomineralisation. Outreach across dental and medical professions, allied industry, public-health providers, scientists, affected families and the public has been achieved through innovative partnering in research-based education and advocacy.

### **The Chalky Teeth Problem**

The link between Molar Hypomineralisation (MH) and tooth decay (caries) was reported in 1949, yet today this costly public-health problem still remains poorly recognised. Discoloured enamel defects (now termed "opacities") were originally described as "chalky". The D3 Group reintroduced this old but familiar term to capture public attention. Worldwide research shows that "chalky 6-year molars" (MH) affects about 1-in-6 schoolchildren. Such children may carry >10-fold relative risk for caries and allied treatments, often imposing lifelong costs and suffering. Standard preventive care (fluorides, oral hygiene, sugar control) regularly fails on chalky teeth. Consequently, MH is widely misdiagnosed as caries, disrupting public health statistics and policy.

### **Chalky Teeth Campaign goals**

The Campaign seeks to publicise that, on its upside, the Chalky Teeth Problem offers major opportunities for reducing childhood caries worldwide. MH seemingly originates from infantile illness but specific causes remain unclear. If research can identify these causes, MH may become preventable medically. Joint medico-dental effort is needed to undertake such preventively-focussed research. With an estimated >12 million new cases annually, prevention would provide major socioeconomic benefits worldwide.

### **The D3 Group (D3G)**

Formed in 2007, D3G is a world-first cross-sector network seeking better understanding and care of people with **Developmental Dental Defects** (DDD=D3s), particularly MH. Melbourne-based, D3G now has >250 members across Australia and New Zealand (Australasia) plus many overseas correspondents. Led by scientists and clinical academics, D3G has unprecedented capabilities for research and education.

### **Accomplishments**

D3G launched its pioneering online education resource ([www.thed3group.org](http://www.thed3group.org)), a "doctor-dentist-scientist alliance" with two Australasian Royal Colleges (physicians, dental), and the Chalky Teeth media campaign in 2013.

- Broad media attention was received (national TV/radio/newspapers, >42 overseas reports)
- Website praised as a much-needed world-first and for educationally prioritising public over profession
- Incorporation of "Tooth Science" and research literature saluted by practitioners and public
- Worldwide usage, generating regular correspondence about translation/membership/advice
- Highly trafficked, now averaging >250 visits/day (total >3 million hits from >195,000 visits)
- All five educational sections used heavily (Kids, Families, Community, Practitioners, Researchers)
- Children's storybook ("Sam's story") downloaded >5,200 times
- Practitioners report new referrals and major savings in chairside-education time
- Australasian Royal Colleges' position statement on oral health updated to include MH (a world-first policy guideline)
- A public-friendly "Chalky Teeth Campaign" landing site was launched in 2015, simplifying access to the main website

### **Partnership**

D3G's cross-sector partnership ethos (the "D3 family", spanning scientists to affected kids) has engendered widespread respect, support and traction.

- Logo endorsements from 18 professional organisations and corporates including world-peak for paediatric dentistry
- "Coalface" role of therapists/auxiliaries nurtured collaboratively via the 3 Australasian peak bodies and specialists
- Charitable financial support from across the "D3 family" (industry, practitioners, public)
- 8,200 glossy copies of Sam's storybook distributed across Australasia, sponsored by D3 family members
- Industry-D3G collaborations used to develop dentist aids (patient brochures, children's stickers)
- 20,000 industry-D3G brochures, 43,000 stickers and 28,000 referral cards distributed across Australasia

In summary, this initiative casts an entrenched oral-health problem in new medico-dental light. By engaging public support for research, it is hoped a preventive route will be found and implemented.

**More info:** Websites ([www.thed3group.org](http://www.thed3group.org), [www.chalkyteeth.org](http://www.chalkyteeth.org)), TV bulletin ([www.youtube.com/watch?v=nmP66Vg-mkU](http://www.youtube.com/watch?v=nmP66Vg-mkU)), Media package ([www.scienceinpublic.com.au/category/d3](http://www.scienceinpublic.com.au/category/d3))