

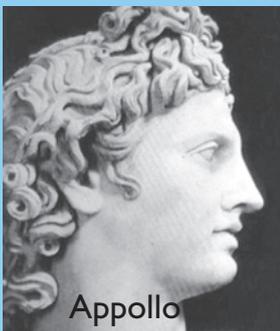
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The Art & Science of the Smile

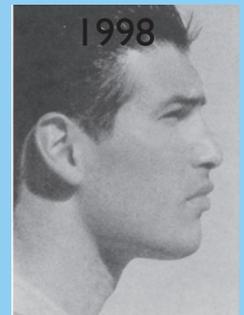
Fashion in Faces

1. The Evolution of Aesthetic Standards



Aesthetic facial preferences have changed over the last century resulting in changes in orthodontic extraction patterns. The changes in community standards of facial beauty challenge our previously un-questioned cephalometric values that were derived from untreated American white caucasian teenagers of the 1950's. We may ask - Are those standards still a valid benchmark on which to base today's treatment goals? In 1900, before cephalometric data existed, Edward Angle - The father of modern Orthodontics - considered Apollo Belvedere as a suitable standard of beauty, but these days we think that Apollo's face is too retrusive.

Our preferences (as judged from USA fashion models between 1930 and 1998) have changed to fuller, more protrusive lips with more vermilion show and more protrusive jaws. (Nguyen & Turley, 1998, Am J Orthod Dentofacial Orthop 114(2): 208-17.) Images of individuals with even fuller lips and profiles from several racial groups such as Asians, Latinos and Negroes have influenced



concepts of beauty away from white caucasian standards, right across the globe with cross-cultural effects. (Rhodes, G. Attractiveness of own-race, other-race, and mixed-race faces. J. Perception 2005: 34: 319-40). Rhodes also found in Australia and in Japan that Eurasian faces and more feminised features are thought to be more attractive. The influence of Hollywood is also evident. Yet whilst 'beauty is in the eye of the beholder', the stability of the orthodontic results remain of paramount importance.



2. Effect of Gender and Ageing

Women have fuller vermilion show, more upper tooth show at rest and on smiling and shorter, fuller and more outwardly curled lips than men. During ageing, the lips get thinner; they drop (as do other body parts) reducing the beautiful, full upper tooth show. These physiological changes may help dentists hide unsightly upper crown margins, but the concomitant result of this drop is an increased display of lower incisors which is perceived as less attractive when it reveals imbrications and black spaces. As dental treatment planners, we must allow for these ageing effects and integrate counter-measures into our treatment plans so as to prolong the "forever young" appearance of our patients. How is this achieved?

3. Observe the patient carefully

We must talk to our patients whilst they sit in upright, social positions, to reveal tooth display during relaxed speech, smiling and rest. There will be extremes to the variations we observe. We need to highlight our observations to the patient to understand the patient's awareness and preferences. For clinical photography, the image must capture the various natural lip-tooth expressions, both for our records and for patient education. Older patients are often surprised at their amount of lower incisor display. (Zachrisson, B. Facial aesthetics: Guide to tooth positioning and maxillary incisor display. WJO 8(3) 2007: 308-314: 314)

4. Include Upper Labial Segment display in the Treatment plan

Retrusive & elevated upper teeth



Upper teeth advanced & extruded



Micro Issues: The crown lengths, shapes & proportions, the crown tilts, corners, edges, midlines and contacts, are all within the dentist's control. But if fixing these will not beautify the patient's smile enough, the problem lies deeper.

Macro Issues: The critical parameters in the public's perception of a lovely smile are:

- The upper gingival margin line relationship to the upper lip
- The congruency of the curve of the upper incisor edges with the lower lip
- The vertical and A-P position of the incisors in the face and lips

If any of these factors deviate much from the normal range, then fixing the micro issues will not suffice and an orthodontic consult should be considered.

5. Are extractions still necessary?

Much less than before! New fashions in faces dictate we "show more teeth" than in the past. This means keeping more teeth. This is easier than in the past because of improvements in knowledge and technology such as:

- Damon™ low friction braces
- Early mixed dentition assessments to garner the leeway spaces that yield crucial amounts of arch length before expansion occurs,
- "Pendulum" appliances to distalise molars large amounts
- Orthodontic mini-screw temporary implants for anchorage instead of extractions that would constrict arch dimensions.

These factors all give much more control in what we call "face-driven" treatment planning, where the goals are determined by the patient's aesthetics, and much less by limitations of orthodontic mechanical systems.



Molar Distalizer Avoids Extraction

6. Can Braces be Aesthetic?



Incognito(TM) lingual system

YES! With new technology, invisible braces at an affordable price are now a reality. Invisalign™ which is more powerful than before is utilised for alignment and inter-arch corrections and some extraction cases. No compromise is needed for more complex invisible braces cases because Dr Wexler provides concealed, hidden lingual iBraces™ and Incognito™ braces. These systems are totally CAD-CAM custom-built to each patient's tooth morphology and malocclusion. Precision gold brackets and bracket bases are cast from computer printed wax prototypes and robot-made Hi-Tech alloy archwires. These systems have unsurpassed precision and improved treatment times making modern lingual orthodontics practical and affordable.

Next Issue: 3D Radiographs

Dr Wexler provides high quality state of the art specialist orthodontic services for children and adults including the latest in lingual hidden "invisible" braces and early orthopaedic treatments.

Please call our office for an easy-to-use referral kit. This kit will inform and assist your patient in making the most of their orthodontic services.

Patient Images in this publication were used with consent.

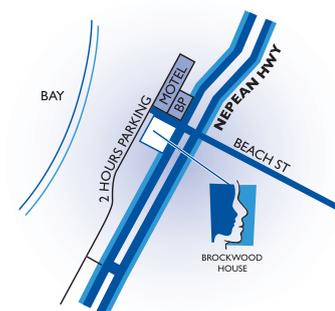


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