# Quick reference guide to Orthodontic assessment and treatment need

## Eruption Patterns

### Eruption pattern of deciduous teeth

| | | | | | |
|---|---|---|---|---|---|
| Upper | | AB | D | C | E |
| Lower | A | B | D | C | E |

### Eruption pattern of permanent teeth

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Upper | 6 | | 1 | 2 | | 4 | | 5 | 3 | 7 | 8 |
| Lower | 6 | 1 | 2 | | 3 | | 4 | 5 | | 7 | 8 |

## Average Eruption Dates[1]

### Average eruption dates of deciduous teeth (in months)

| Tooth | A & B | C | D | E |
|---|---|---|---|---|
| Eruption Date | 6-9 | 16-18 | 12-14 | 20-30 |

### Average eruption dates of permanent teeth (in years)

| Tooth | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Uppers | 7-9 | 7-9 | 11-12 | 10-11 | 10-12 | 6-7 | 11-13 | 17-21 |
| Lowers | 6-8 | 6-8 | 9-10 | 10-12 | 11-12 | 6-7 | 11-13 | 17-21 |


References

1. Scott JH & Symons NBB, 1990, Introduction to Dental Anatomy 9th ed. Churchill Livingstone.
2. Brook PH & Shaw WC (1989). The development of an index of orthodontic treatment priority. Eur J Orthod 11 : 309-320.


## Index of Orthodontic Treatment Need©(DHC)[2]

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**Grade 3 (Borderline need)** **For NHS treatment also need aesthetic >6**

3a. Increased overjet 3.5mm ≤ 6mm with incompetent lips
3b. Reverse overjet 1mm ≤ 3.5mm
3c. Anterior or posterior crossbites with 1mm ≤ 2mm discrepancy between retruded contact position and intercuspal position
3d. Contact point displacements 2mm ≤ 4mm
3e. Lateral or anterior open bite 2mm ≤ 4mm
3f. Deep overbite complete to gingival or palatal tissues but no trauma

**Grade 4 (Need treatment)**

4h. Less extensive hypodontia requiring pre-restorative orthodontics or orthodontic space closure to obviate the need for a prosthesis.
4a. Increased overjet 6mm ≤ 9mm
4b. Reverse overjet >3.5mm with no masticatory or speech difficulties
4m. Reverse overjet 1mm < 3.5mm with recorded masticatory and speech difficulties.
4c. Anterior or posterior crossbites with greater than 2mm discrepancy between retruded contact position and intercuspal position
4l. Posterior lingual crossbite with no functional occlusal contact in one or both buccal segments
4d. Severe contact point displacements >4mm
4e. Extreme lateral or anterior open bites >6mm
4f. Increased and complete overbite with gingival or palatal trauma
4t. Partially erupted teeth, tipped and impacted against adjacent teeth
4x. Presence of supernumerary teeth

**Grade 5 (Need treatment)**

5i. Impeded eruption of teeth (except for third molars) due to crowding, displacement, the presence of supernumerary teeth, retained deciduous teeth or any pathological cause
5h. Extensive hypodontia with restorative implications (>1 tooth missing in any quadrant) requiring pre-restorative orthodontics
5a. Increased overjet >9mm
5m. Reverse overjet >3.5mm with reported masticatory and speech difficulties
5p. Defects of cleft lip and palate and other craniofacial anomalies
5s. Submerged deciduous teeth

# Quick reference guide to Orthodontic assessment and referral

Scott JK and Atack NE, 2015

| Stage | Normal Development | Indications for referral |
|---|---|---|
| **Deciduous Dentition** | • Normal eruption pattern (see overleaf)<br>• Spacing is normal (primate spaces)<br>• Encourage cessation of thumb/finger/dummy sucking before 5 years old | • Severe skeletal discrepancies<br>• Severely delayed dental development<br>• Missing/supplemental teeth<br>• History of head and neck radiotherapy +/- chemotherapy<br>• Advice for balancing/compensating extractions |
| **Mixed Dentition** | • Normal eruption pattern (see overleaf)<br>• Contralateral teeth should erupt within 6/12<br>• Midline (median) diastema normal<br>• Maxillary canines palpable at 10 years old | • Severe skeletal patterns where early treatment may be appropriate e.g. developing class II/III<br>• Dental anomalies e.g. double teeth, dens-in-dente, talon cusps<br>• Developmentally missing permanent teeth<br>• Supernumerary teeth<br>• Teeth in unfavourable positions e.g. canines<br>• Impacted first permanent molars<br>• Infraoccluded teeth<br>• Crossbites<br>• Extraction advice where severe crowding evident or first molars have poor prognosis<br>• Advice following trauma to permanent teeth |
| **Permanent Dentition** | • Skeletal base acceptable<br>• All permanent teeth present<br>• Class I incisors<br>• Class I molar relationship<br>• Average overjet 2-4mm<br>• Average overbite (1/3rd – ½ lower inc coverage)<br>• Well aligned arches | • Clear-cut IOTN eligible for NHS treatment?<br>**YES (IOTN 3/6 and above)** Refer to NHS Orthodontic provider<br>**NO (below IOTN 3/6)** Discuss private referral to Orthodontic provider<br>• Borderline cases (Grade 3 below 3/6) can be referred for NHS assessment as these cases can be difficult to evaluate<br>• Remember, every patient has the right to a second opinion<br>• Adults may qualify for NHS treatment e.g. if they require complex multidisciplinary care. Otherwise, please refer them to an orthodontic provider for private treatment |

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