

ORTHODONTICS

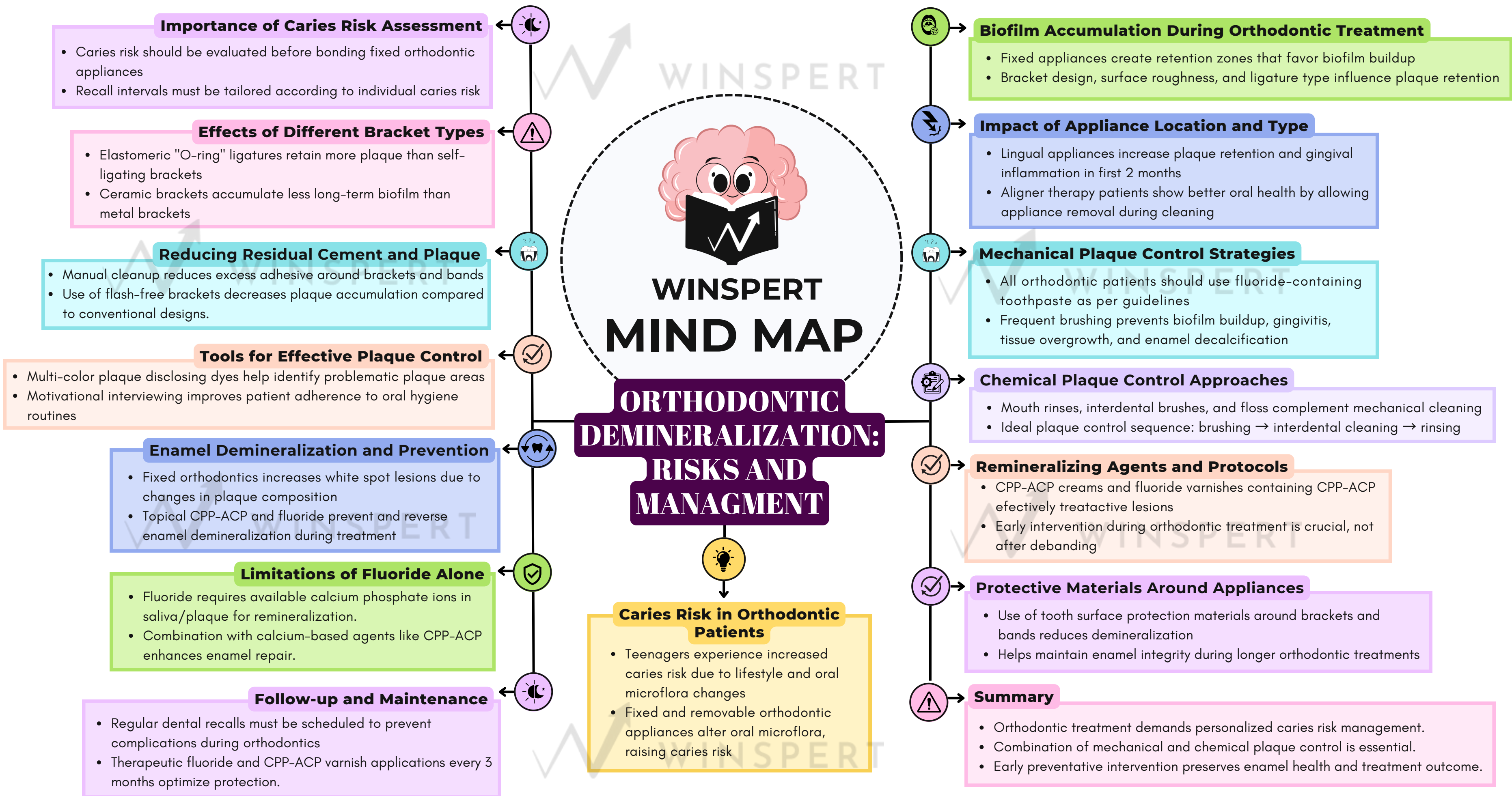
ORTHODONTIC DEMINERALISATION



MIND MAP & CUE CARDS



BY DR. JIGYASA SHARMA





**WINSPERT
CUE CARDS**

**ORTHODONTIC
DEMINERALISATION**

Question 1

**What changes during
childhood to teenage years
increase caries risk according
to the text?**



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ORTHODONTIC DEMINERALISATION

Answer 1

As patients progress from childhood to teenage years, changes in lifestyle and oral microflora increase their risk of caries.



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**ORTHODONTIC
DEMINERALISATION**

Question 2

How do removable and fixed orthodontic treatments affect oral microflora and caries risk?



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ORTHODONTIC DEMINERALISATION

Answer 2

Removable and fixed orthodontic treatments alter oral microflora, which can dramatically increase the risk of caries.



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**ORTHODONTIC
DEMINERALISATION**

Question 3

**Why is caries risk assessment
important before bonding
fixed orthodontic appliances?**



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DEMINERALISATION**

Answer 3

Because fixed appliances impede mechanical oral hygiene, increasing the risk of caries, caries risk assessment is crucial before bonding to tailor prevention and homecare protocols for each patient.



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**ORTHODONTIC
DEMINERALISATION**

Question 4

**What impact do traditional
fixed orthodontic appliances
have on plaque control?**



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**ORTHODONTIC
DEMINERALISATION**

Answer 4

Traditional fixed appliances create stagnation zones that favor biofilm accumulation, making mechanical plaque control more challenging.



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**ORTHODONTIC
DEMINERALISATION**

Question 5

How does the design and material of orthodontic brackets affect plaque retention?



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DEMINERALISATION**

Answer 5

Bracket design, surface roughness, and ligature type influence plaque retention; elastomeric ligature “O-rings” retain more plaque than self-ligating brackets, and ceramic brackets accumulate less biofilm long-term than metal brackets.



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DEMINERALISATION**

Question 6

What is the effect of lingual appliances on oral biofilm in the early stages of treatment?

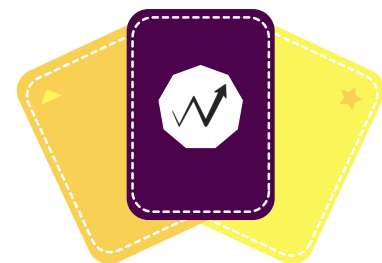


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**ORTHODONTIC
DEMINERALISATION**

Answer 6

Lingual appliances significantly alter the wearer's biofilm in the first two months of treatment, causing increased plaque retention associated with gingival appliances.



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**ORTHODONTIC
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Question 7

Why do patients undergoing aligner therapy exhibit better oral health compared to those with traditional fixed appliances?

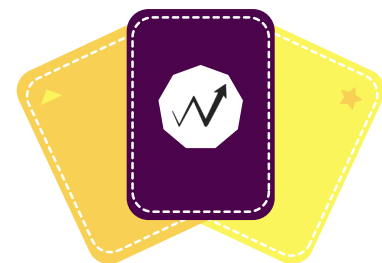


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**ORTHODONTIC
DEMINERALISATION**

Answer 7

Aligners can be removed for cleaning, allowing better oral hygiene practices, which results in significantly better oral health and gingival status compared to traditional fixed orthodontic therapy.

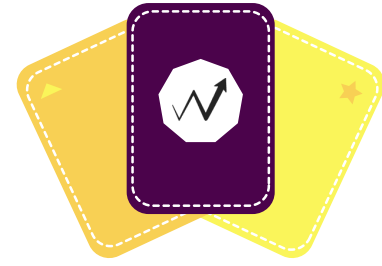


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**ORTHODONTIC
DEMINERALISATION**

Question 8

What mechanical plaque control recommendations are given for teenage patients with orthodontic appliances?



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**ORTHODONTIC
DEMINERALISATION**

Answer 8

All teenage patients should use fluoride dentifrice, and frequent tooth brushing is necessary to reduce biofilm accumulation, prevent gingivitis, tissue overgrowth, and enamel decalcification.



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**ORTHODONTIC
DEMINERALISATION**

Question 9

How can multi-color plaque disclosing dyes assist in plaque control during orthodontic treatment?

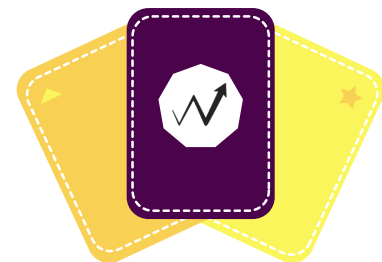


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**ORTHODONTIC
DEMINERALISATION**

Answer 9

Multi-color disclosing dyes identify areas where patients struggle with mechanical cleaning by showing newly formed plaque in pink and older plaque in blue/purple, helping clinicians target high caries risk areas and provide focused oral hygiene education.



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**ORTHODONTIC
DEMINERALISATION**

Question 10

What role do CPP-ACP and fluoride play in preventing enamel demineralization during orthodontic treatment?



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**ORTHODONTIC
DEMINERALISATION**

Answer 10

Topical CPP-ACP and fluoride can reverse or prevent white spot lesions by promoting remineralization. CPP-ACP can be applied as a crème or combined with fluoride varnish, which is more effective.

ORTHODONTICS

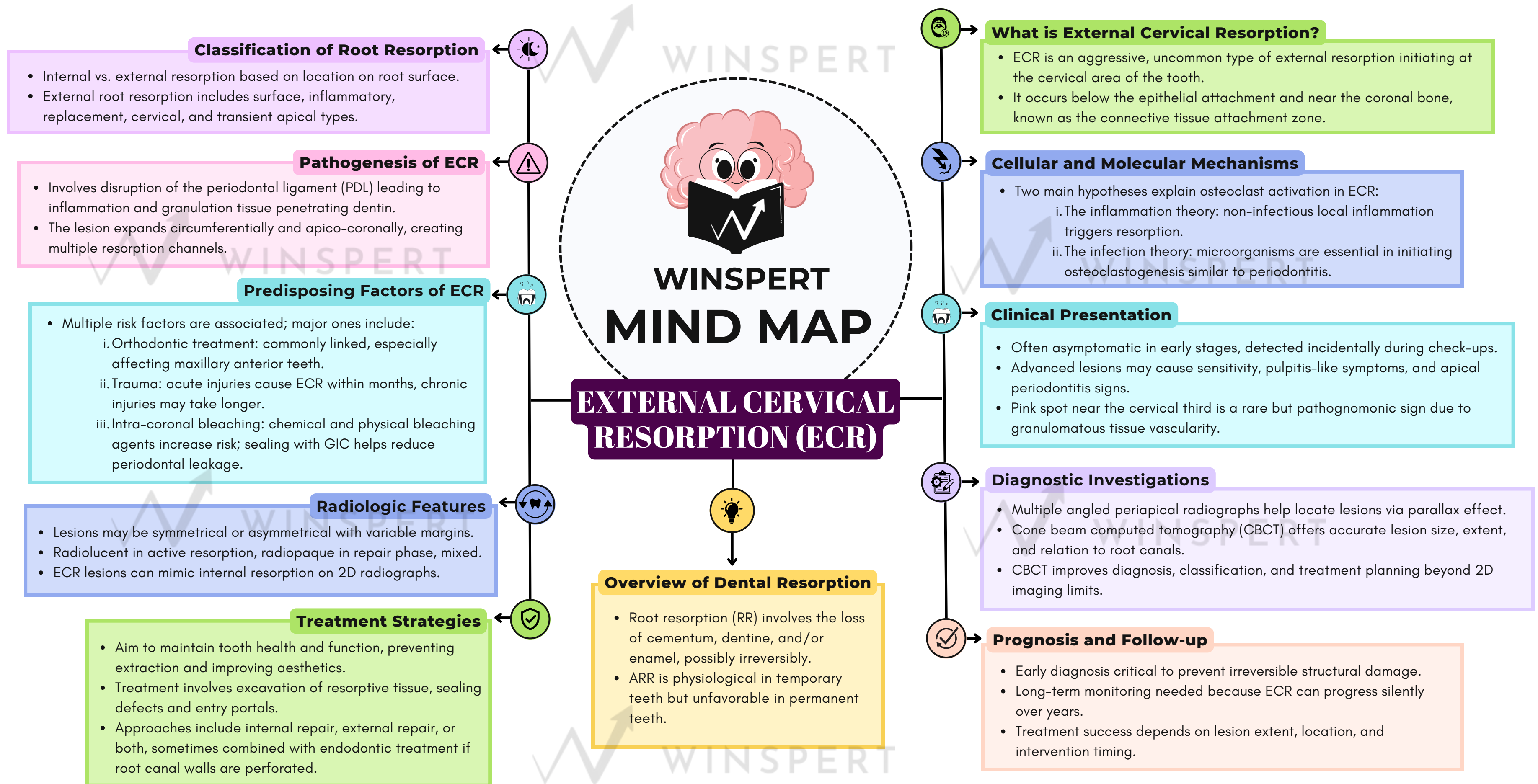
EXTERNAL CERVICAL RESORPTION



MIND MAP & CUE CARDS



BY DR. JIGYASA SHARMA



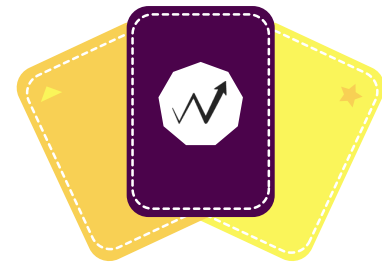


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**EXTERNAL CERVICAL
RESORPTION**

Question 1

What is root resorption and why is it considered a challenge in dentistry?



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EXTERNAL CERVICAL RESORPTION

Answer 1

Root resorption is a pathological process causing the loss of cementum, dentine, and/or enamel, often irreversibly, affecting both vital and non-vital teeth due to odontoclastic activity. It is considered a challenge in dentistry because of its complexity and difficulty in diagnosis and management.



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**EXTERNAL CERVICAL
RESORPTION**

Question 2

**How is root resorption
classified based on location?**

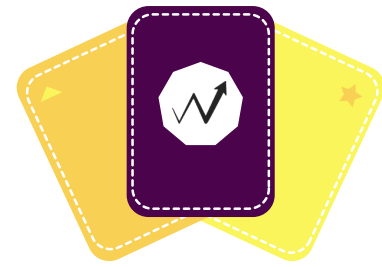


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EXTERNAL CERVICAL RESORPTION

Answer 2

Root resorption is classified into internal resorption and external resorption depending on whether it occurs inside the root canal or on the external surface of the root.



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**EXTERNAL CERVICAL
RESORPTION**

Question 3

What are the main subtypes of external root resorption?

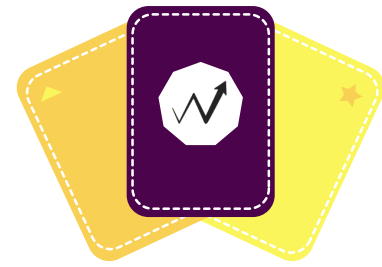


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EXTERNAL CERVICAL RESORPTION

Answer 3

External root resorption can be subclassified into surface resorption, external inflammatory resorption, external replacement resorption, external cervical resorption, and transient apical resorption.



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**EXTERNAL CERVICAL
RESORPTION**

Question 4

What characterizes external cervical resorption (ECR) and where does it initiate?



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EXTERNAL CERVICAL RESORPTION

Answer 4

External cervical resorption is an aggressive and uncommon type of external resorption that initiates at the cervical area of the tooth, just below the epithelial attachment and coronal bone, in the zone called the connective tissue attachment.



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**EXTERNAL CERVICAL
RESORPTION**

Question 5

**What is the pathogenesis of
external cervical resorption?**



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EXTERNAL CERVICAL RESORPTION

Answer 5

The pathogenesis involves disruption of the periodontal ligament (PDL) causing inflammation, infiltration of inflammatory cells, formation of granulation tissue that penetrates dentin, and extension of the lesion circumferentially and apico-coronally creating multiple resorption channels.



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**EXTERNAL CERVICAL
RESORPTION**

Question 6

What are the two main hypotheses explaining the inflammatory response that activates osteoclastogenesis in ECR?

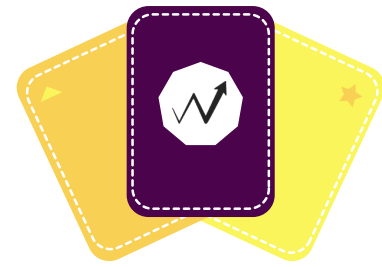


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EXTERNAL CERVICAL RESORPTION

Answer 6

The Infection Theory: microorganisms are essential for initiating osteoclastogenesis, similar to periodontitis mechanisms.



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**EXTERNAL CERVICAL
RESORPTION**

Question 7

Which are the major predisposing factors associated with external cervical resorption?



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EXTERNAL CERVICAL RESORPTION

Answer 7

The major predisposing factors include orthodontic treatment, dental trauma, and intra-coronal bleaching procedures.



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**EXTERNAL CERVICAL
RESORPTION**

Question 8

How does external cervical resorption clinically present in its early and advanced stages?



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EXTERNAL CERVICAL RESORPTION

Answer 8

Early-stage ECR is asymptomatic and often discovered accidentally during routine exams. Advanced stages may cause symptoms like temperature sensitivity, percussion pain, fistulas, and a characteristic pink spot on the cervical third of the tooth due to vascular granulation tissue.



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**EXTERNAL CERVICAL
RESORPTION**

Question 9

**How can external cervical
resorption be distinguished
radiographically?**



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CUE CARDS**

EXTERNAL CERVICAL RESORPTION

Answer 9

ECR lesions can appear radiolucent, radiopaque, or mixed depending on the stage. Multiple angled periapical radiographs show lesion movement with angle changes, helping locate buccal or lingual positions. CBCT provides a more accurate 3D assessment of size, extension, and proximity to the root canal.



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**EXTERNAL CERVICAL
RESORPTION**

Question 10

What are the main treatment strategies for external cervical resorption?



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CUE CARDS**

EXTERNAL CERVICAL RESORPTION

Answer 10

Treatment aims to preserve the tooth's health and function, usually by surgically removing resorptive tissue, restoring the defect, and sealing entry points. Treatment options include internal repair, external repair, or combined approaches, and occasionally endodontic treatment if root canal perforation occurs.

ORTHODONTICS

MISSING CANINES & MISSING PERMANENT TEETH



MIND MAP & CUE CARDS



BY DR. JIGYASA SHARMA

WINSPERT MIND MAP

MISSING CANINES AND MISSING PERMANENT TEETH

Severity and Associated Changes

- Severe hypodontia/oligodontia: Absence of more than six teeth
- Oligodontia often linked with positional, morphological dental changes and maxillofacial skeletal growth disturbances

Importance of Early Diagnosis

- Early detection of ectopic or missing canines crucial for management
- Radiographic investigation recommended around 10–11 years old if eruption is doubtful.

Commonly Missing Teeth

- Third molars are the most frequently missing teeth
- Next most common are permanent second premolars and upper lateral incisors

Retained Primary Teeth

- Primary teeth retention due to missing, impacted or malpositioned permanent successors
- Maxillary deciduous canines most commonly retained primary teeth

Tooth Transposition

- Rare condition, often involving first premolars with lateral or central incisors
- Less frequent with second premolars

Infant Oral Mutilation (IOM) and Its Effects

- Traditional removal of healthy deciduous tooth germs in infants, mainly in sub-Saharan Africa
- Causes missing, impacted, or hypoplastic permanent anterior and canine teeth
- Dental practitioners should be aware of IOM in patients from affected regions for proper diagnosis and management

Definition of Hypodontia and Oligodontia

- Hypodontia: Congenital absence of fewer than 6 permanent teeth (excluding third molars)
- Oligodontia: Congenital absence of 6 or more permanent teeth (excluding third molars)

Rarity of Missing Particular Teeth

- Permanent canines, first molars, and second molars absence is very rare
- Often occurs with syndromic oligodontia

Characteristics and Prevalence of Hypodontia

- Retention of deciduous teeth beyond normal shedding age common hypodontia
- 80% of hypodontia cases involve missing only one or two teeth

Hypodontia and Syndromes

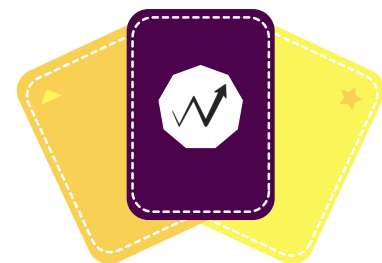
- Frequently associated with syndromes, especially X-linked ectodermal dysplasia
- Oligodontia may coexist with ectodermal abnormalities requiring multidisciplinary treatment.

Ectopic Eruption of Maxillary Permanent Canines

- Eruption usually occurs mesially and labially; can be palpated high in labial sulcus.
- Causes include genetics, bone diseases, tumors, cysts, crowding, and retained deciduous canines

Management of Agenesis or Impacted Permanent Canines

- Treatment selection depends on family context and presentation timing.
- Options include observation, orthodontic referral, or restoration of retained deciduous canines mimic permanent ones



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**MISSING CANINES & MISSING
PERMANENT TEETH**

Question 1

**What is the difference
between hypodontia and
oligodontia in terms of the
number of missing teeth?**

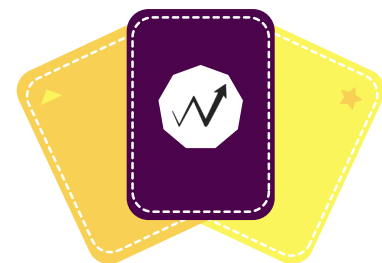


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MISSING CANINES & MISSING PERMANENT TEETH

Answer 1

Hypodontia refers to the absence of fewer than 6 teeth (excluding third molars), while oligodontia refers to the absence of 6 or more teeth (also excluding third molars).

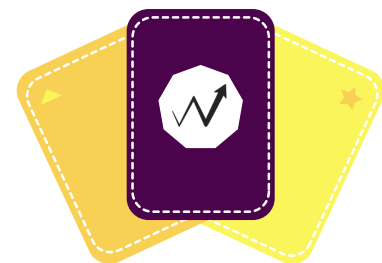


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**MISSING CANINES & MISSING
PERMANENT TEETH**

Question 2

Which teeth are most commonly missing due to agenesis in permanent dentition?



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MISSING CANINES & MISSING PERMANENT TEETH

Answer 2

The most commonly missing permanent teeth due to agenesis are the third molars, followed by permanent second premolars and upper lateral incisors.



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**MISSING CANINES & MISSING
PERMANENT TEETH**

Question 3

What clinical feature often characterizes hypodontia in relation to primary teeth?

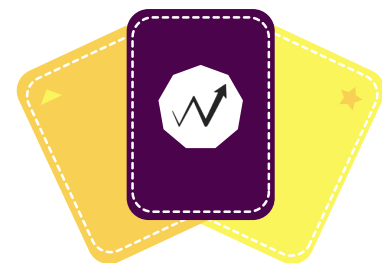


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**MISSING CANINES & MISSING
PERMANENT TEETH**

Answer 3

Hypodontia is often characterized by retention of deciduous (primary) teeth beyond their normal shedding age.

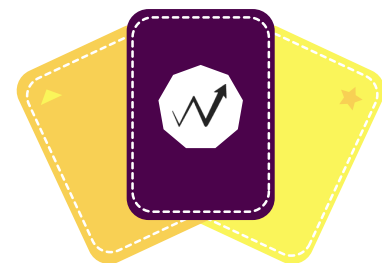


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**MISSING CANINES & MISSING
PERMANENT TEETH**

Question 4

What is a common cause for retention of primary maxillary canines?

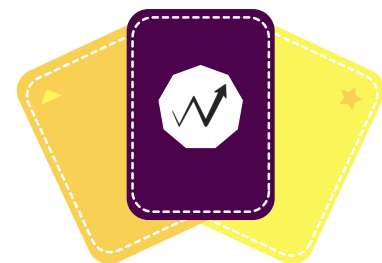


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MISSING CANINES & MISSING PERMANENT TEETH

Answer 4

Primary maxillary canines are commonly retained because the permanent canines often deviate from their normal eruption path and become impacted.



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MISSING CANINES & MISSING PERMANENT TEETH

Question 5

What are some causes attributed to the ectopic eruption of maxillary permanent canines?

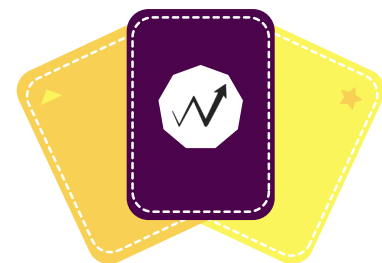


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CUE CARDS**

MISSING CANINES & MISSING PERMANENT TEETH

Answer 5

Causes include genetic factors, bone disease, tumors, cysts, crowding, and persisting deciduous canines.

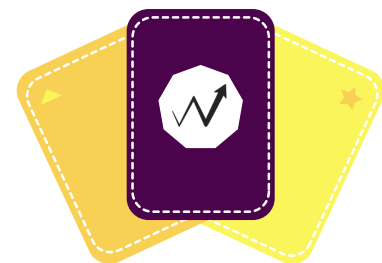


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**MISSING CANINES & MISSING
PERMANENT TEETH**

Question 6

**By what age is early
radiographic investigation
recommended to monitor the
eruption of permanent canines?**



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**MISSING CANINES & MISSING
PERMANENT TEETH**

Answer 6

Early radiographic investigation is recommended by the age of 10 to 11 years whenever there is doubt about the eruption pattern of permanent canines.



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**MISSING CANINES & MISSING
PERMANENT TEETH**

Question 7

**How does oligodontia affect
the remaining teeth and
maxillofacial skeleton?**

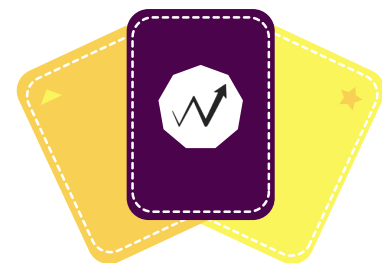


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CUE CARDS**

MISSING CANINES & MISSING PERMANENT TEETH

Answer 7

Oligodontia is often associated with positional and morphological changes of the remaining teeth as well as growth disturbances of the maxillofacial skeleton.

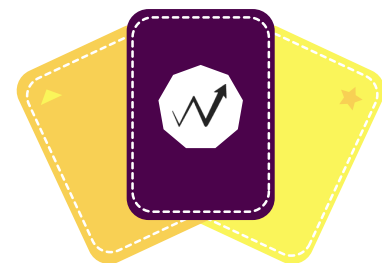


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**MISSING CANINES & MISSING
PERMANENT TEETH**

Question 8

What multidisciplinary approach is needed for patients with oligodontia?

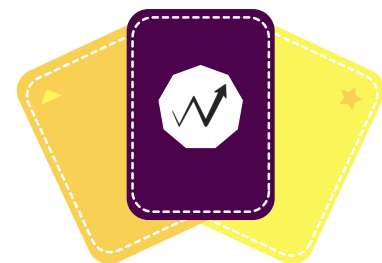


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MISSING CANINES & MISSING PERMANENT TEETH

Answer 8

Patients with oligodontia, often associated with ectodermal abnormalities and syndromes, require a multidisciplinary approach including dental, orthodontic, and possibly medical management.



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**MISSING CANINES & MISSING
PERMANENT TEETH**

Question 9

What is Infant Oral Mutilation (IOM) and what dental complications can it cause?

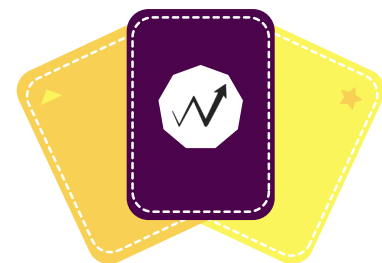


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MISSING CANINES & MISSING PERMANENT TEETH

Answer 9

IOM is a traditional practice in sub-Saharan Africa involving extraction of healthy deciduous tooth germs, commonly mandibular canines, in infants under 1 year old. It can cause missing, impacted, or hypoplastic permanent anterior and canine teeth.

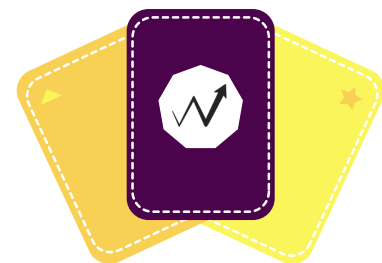


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**MISSING CANINES & MISSING
PERMANENT TEETH**

Question 10

What are some management options for agenesis or impacted permanent canines?



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MISSING CANINES & MISSING PERMANENT TEETH

Answer 10

Management options include no early intervention with delayed orthodontic or prosthetic treatment, referral to an orthodontist for further management, or modifying retained deciduous canines to resemble permanent canines, depending on the patient's age and family situation.

ORTHODONTICS

SPACE MAINTENANCE



MIND MAP & CUE CARDS



BY DR. JIGYASA SHARMA

Causes of Early Loss of Primary Teeth

- Dental caries and trauma are common reasons for premature loss
- Early loss can lead mid-line shifts and reduced dental arch length

Leeway Space and Its Significance

- Primary canines & molars occupy more space than their permanent successors
- Maintaining leeway space can prevent up to 4.3 mm of crowding bilaterally

Contraindications for Space Maintenance

- Space maintenance unnecessary if permanent tooth eruption imminent
- Not recommended in high caries risk patients or non-compliant children with removable appliances

Band and Loop Space Maintainers

- Unilateral fixed appliance for posterior segments
- Consists of band and soldered stainless steel loop, used mainly for one tooth space.

Upper Arch Appliances: Nance Palatal Arch & Trans Palatal Arch

- Nance Arch includes acrylic button for stability but can cause palatal irritation
- Trans Palatal Arch uses wire with omega loop, causing less irritation and easier hygiene maintenance.

Removable Space Maintainers: Vacuum Formed Retainers (VFRS)

- Clear plastic retainers worn primarily at night to prevent tooth drifting.
- Inexpensive, easily replaceable, and adaptable as teeth erupt.

Multidisciplinary Approach in Management

- Collaboration between general dentists, orthodontists, and pediatric dentists is essential.
- Individualized treatment planning maximizes effectiveness and minimizes complications.

WINSPERT MIND MAP

SPACE MAINTENANCE: AN OVERVIEW FOR CLINICIANS

Importance of Primary Teeth

- Primary teeth are vital for aesthetics and function in children
- They hold space for permanent teeth and guide occlusion

Effects of Premature Tooth Loss

- Loss of deciduous canine often causes mid-line shift
- Early loss of second deciduous molar decreases arch length, especially before age 9.

Indications for Space Maintenance

- Prescribed individually, especially after early loss of second molars or unilateral canine loss
- Not required if the successor tooth is close to eruption or in severe crowding cases

Types of Space Maintainers

- Fixed vs removable, unilateral vs bilateral types available
- Examples: Band and loop, crown and loop, LLHA, Nance palatal arch, trans palatal arch, Groper bridge, partial dentures, vacuum formed retainers.

Lower Lingual Holding Arch (LLHA)

- Popular bilateral mandibular space maintainer
- Prevents lingual tipping of incisors and mesial movement of molars; must avoid use before permanent incisors erupts

Anterior Space Maintainers and Partial Dentures

- Groper Fixed Anterior Bridge used for lost anterior primary teeth with aesthetic concerns
- Partial dentures replace multiple missing teeth or early incisor loss mainly for appearance and function.

Advantages and Disadvantages of Space Maintainers

- Fixed appliances are plaque retentive and harder to clean but require less patient compliance
- Removable appliances may cause temporary speech issues but allow better oral hygiene.

Survival Rates and Research Overview

- Various studies exist assessing median survival and effectiveness of space maintainers
- Longevity depends on appliance type, patient compliance, and oral hygiene maintenance.



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**SPACE
MAINTENANCE**

Question 1

**What roles do primary teeth
play in the developing child?**



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**SPACE
MAINTENANCE**

Answer 1

Primary teeth are important for aesthetics and function in the developing child. They help hold space for permanent successors and guide them into occlusion.



**WINSPERT
CUE CARDS**

**SPACE
MAINTENANCE**

Question 2

What are common causes of premature loss of primary teeth?



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CUE CARDS**

**SPACE
MAINTENANCE**

Answer 2

Common causes include dental caries and trauma.



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CUE CARDS**

**SPACE
MAINTENANCE**

Question 3

**What dental changes can
result from the early loss of
primary teeth?**



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**SPACE
MAINTENANCE**

Answer 3

Changes such as mid-line shifts and reduction in dental arch length can be seen in the permanent dentition.

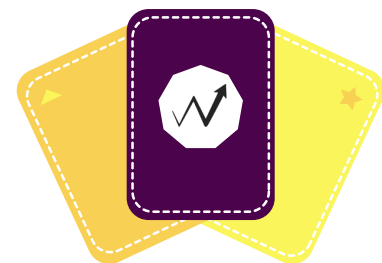


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**SPACE
MAINTENANCE**

Question 4

Why is the loss of a deciduous canine more likely to cause a mid-line shift compared to the loss of a second deciduous molar?



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**SPACE
MAINTENANCE**

Answer 4

Loss of a deciduous canine affects the mid-line position because canines influence mid-line alignment, while loss of a second deciduous molar, especially before age nine, mainly reduces arch length.



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**SPACE
MAINTENANCE**

Question 5

What is "leeway space" and why is it important in space maintenance?

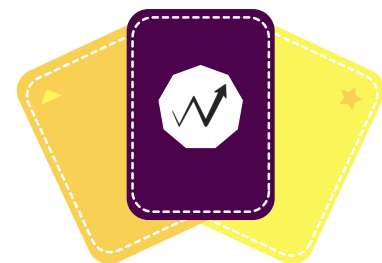


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CUE CARDS**

**SPACE
MAINTENANCE**

Answer 5

Leeway space is the potential space created by the fact that primary canines and molars occupy more space than their permanent successors (canines and premolars). Maintaining leeway space can prevent up to 4.3 mm of crowding during permanent tooth eruption.



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**SPACE
MAINTENANCE**

Question 6

When is space maintenance indicated after premature loss of primary teeth?



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CUE CARDS**

**SPACE
MAINTENANCE**

Answer 6

Space maintenance is indicated especially when there has been early loss of deciduous second molars, loss of deciduous first molars before eruption of permanent first molars, or unilateral loss of deciduous canines.



**WINSPERT
CUE CARDS**

**SPACE
MAINTENANCE**

Question 7

**What are contraindications for
space maintenance?**



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CUE CARDS**

**SPACE
MAINTENANCE**

Answer 7

Space maintenance is not needed when the permanent successor is close to eruption, in severe crowding cases where there is no space for permanent teeth even if space is maintained, and for early loss of primary incisors unless for aesthetic reasons.



WINSPERT
CUE CARDS

SPACE
MAINTENANCE

Question 8

What are the differences between fixed and removable space maintainers in terms of patient compliance and hygiene?



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CUE CARDS**

**SPACE
MAINTENANCE**

Answer 8

Fixed space maintainers require less patient compliance but are more difficult to keep clean and may increase plaque retention. Removable maintainers are easier for oral hygiene but require full-time patient compliance and may cause temporary speech disturbances.



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**SPACE
MAINTENANCE**

Question 9

**Describe the band and loop
space maintainer and its
typical use?**



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**SPACE
MAINTENANCE**

Answer 9

The band and loop is a unilateral fixed cantilevered space maintainer, consisting of a band around a tooth soldered to a stainless steel loop that holds arch length. It is commonly used in posterior segments after early loss of primary molars and is suitable for holding space for one tooth.



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**SPACE
MAINTENANCE**

Question 10

**What are advantages of the
Trans Palatal Arch (TPA) over
the Nance Palatal Arch (NPA)?**



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**SPACE
MAINTENANCE**

Answer 10

The TPA reduces mucosal irritation since it lacks an acrylic button, interferes less with speech and oral hygiene, and can be adjusted in three planes of space for expansion or constriction.

ORTHODONTICS

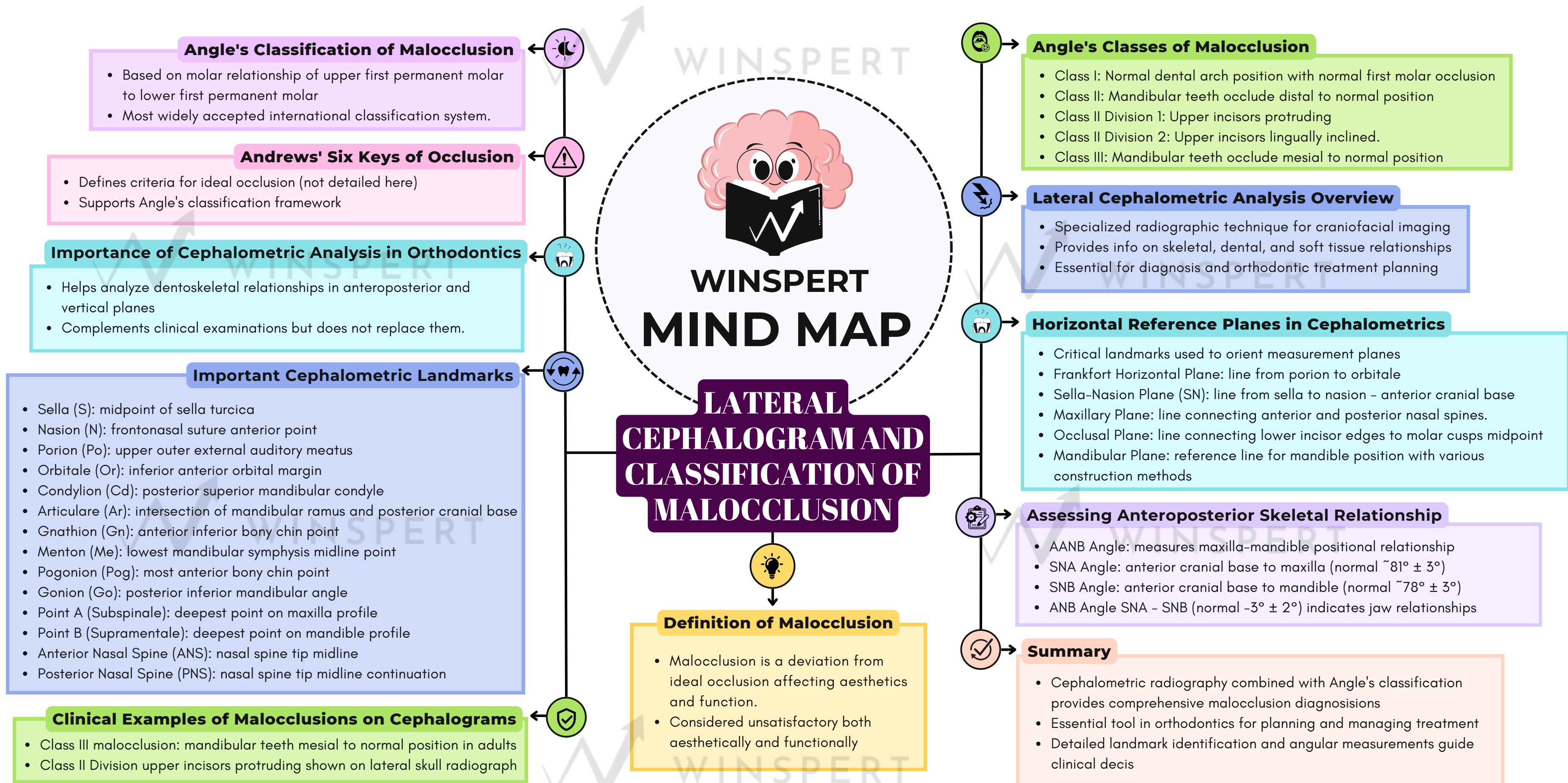
LATERAL CEPHALOGRAM CLASSIFICATION OF MALOCCLUSIONS



MIND MAP & CUE CARDS



BY DR. JIGYASA SHARMA





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LATERAL CEPHALOGRAM CLASSIFICATION OF MALOCCLUSION

Question 1

**What is malocclusion and how
is it generally defined?**



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LATERAL CEPHALOGRAM CLASSIFICATION OF MALOCCLUSION

Answer 1

Malocclusion is defined as an appreciable deviation from the ideal occlusion that may be considered aesthetically or functionally unsatisfactory.



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LATERAL CEPHALOGRAM CLASSIFICATION OF MALOCCLUSION

Question 2

On what basis did Angle classify malocclusion, and what is considered ideal molar occlusion according to him?



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LATERAL CEPHALOGRAM CLASSIFICATION OF MALOCCLUSION

Answer 2

Angle classified malocclusion based on the molar relationship, specifically the mesio-buccal cusp of the upper first permanent molar occluding with the sulcus between the mesial and distal buccal cusps of the lower first permanent molar, which he considered the ideal occlusion.



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LATERAL CEPHALOGRAM CLASSIFICATION OF MALOCCLUSION

Question 3

**What are the main classes of
Angle's classification of
malocclusion?**



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LATERAL CEPHALOGRAM CLASSIFICATION OF MALOCCLUSION

Answer 3

Class III malocclusion: Mandibular teeth located mesial to normal position.



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LATERAL CEPHALOGRAM CLASSIFICATION OF MALOCCLUSION

Question 4

What is the purpose of lateral cephalometric analysis in orthodontics?



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LATERAL CEPHALOGRAM CLASSIFICATION OF MALOCCLUSION

Answer 4

Lateral cephalometric analysis is used to image the craniofacial region in a standardized way to assess the relationship between skeletal, dental, and soft tissue elements for orthodontic diagnosis and treatment planning.



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LATERAL CEPHALOGRAM CLASSIFICATION OF MALOCCLUSION

Question 5

**What anatomical points
define the Frankfort horizontal
plane?**



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LATERAL CEPHALOGRAM CLASSIFICATION OF MALOCCLUSION

Answer 5

The Frankfort horizontal plane is defined by a line drawn from Porion (upper outermost point on the external auditory meatus) to Orbitale (most inferior and anterior point on the orbital margin).



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LATERAL CEPHALOGRAM CLASSIFICATION OF MALOCCLUSION

Question 6

What is the ANB angle, and what does it assess in cephalometric analysis?



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LATERAL CEPHALOGRAM CLASSIFICATION OF MALOCCLUSION

Answer 6

The ANB angle measures the relative anteroposterior relationship between the maxilla and mandible, calculated as the difference between angles SNA (maxillary position) and SNB (mandibular position), helping to assess jaw alignment.



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LATERAL CEPHALOGRAM CLASSIFICATION OF MALOCCLUSION

Question 7

How does an Angle Class II Division 1 malocclusion differ from Class II Division 2 in terms of incisor position?



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LATERAL CEPHALOGRAM CLASSIFICATION OF MALOCCLUSION

Answer 7

In Class II Division 1 malocclusion, the upper incisors are protruding, whereas in Class II Division 2 malocclusion, the upper incisors are lingually inclined (tilted backward).

ORTHODONTICS

DIASTEMA & DEEP BITE MANAGEMENT

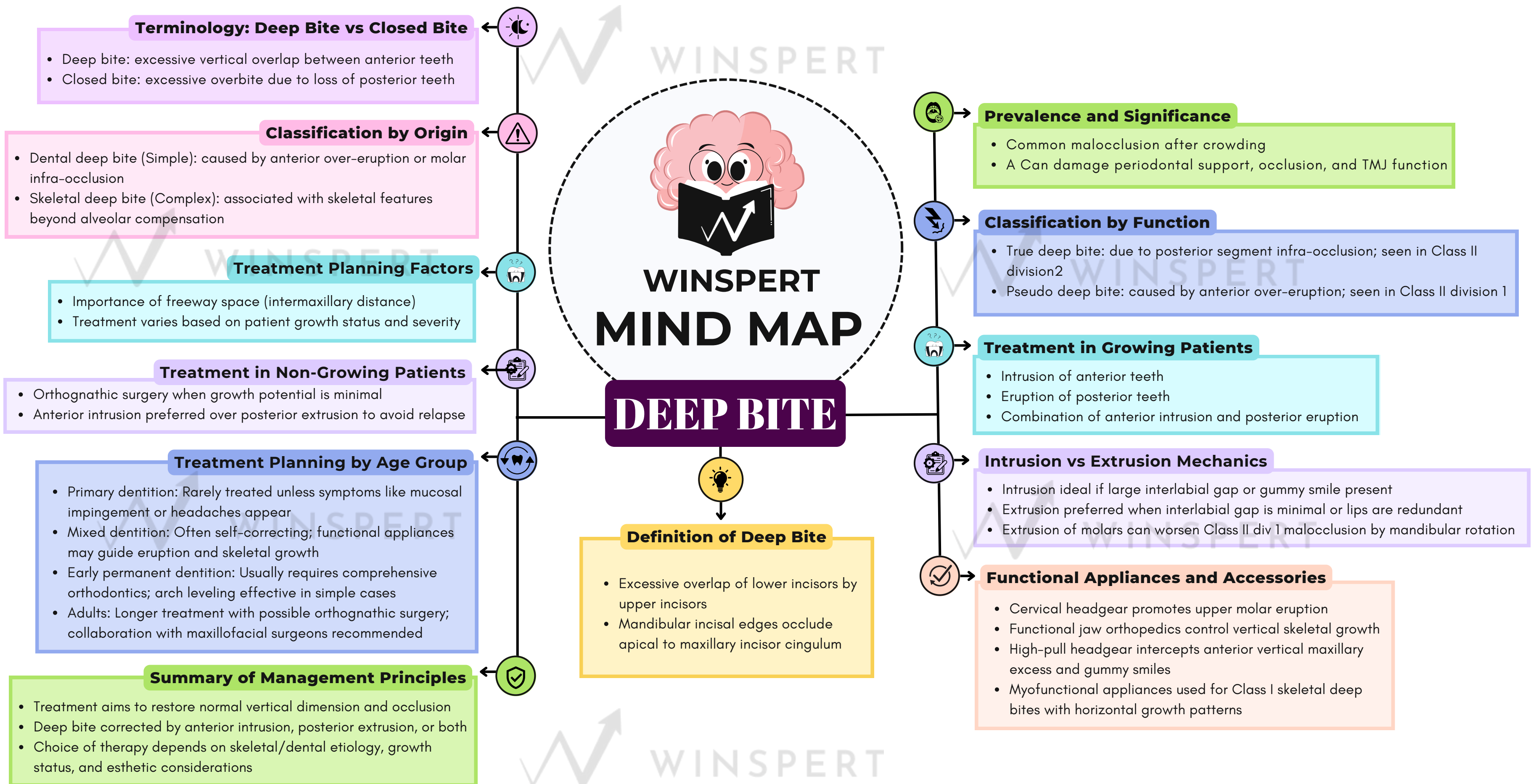


MIND MAP & CUE CARDS



BY DR. JIGYASA SHARMA







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**DIASTEMA & DEEP
BITE MANAGEMENT**

Question 1

What is the prevalence of maxillary midline diastema among five-year-old children during the primary dentition period?



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DIASTEMA & DEEP BITE MANAGEMENT

Answer 1

Maxillary midline diastema appears in 97% of five-year-old children during the period of primary dentition, along with primate spaces.



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**DIASTEMA & DEEP
BITE MANAGEMENT**

Question 2

**Why is the presence of
maxillary midline diastema
considered normal during the
mixed dentition period?**



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DIASTEMA & DEEP BITE MANAGEMENT

Answer 2

It is a normal characteristic in the development of the stomatognathic system, especially during the initial eruption phase of permanent maxillary central incisors ("ugly duckling" stage), and it typically self-corrects with the eruption of canines.



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**DIASTEMA & DEEP
BITE MANAGEMENT**

Question 3

What diagnostic tool is essential for confirming imperfect fusion at the midline of the premaxilla in cases of diastema?



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**DIASTEMA & DEEP
BITE MANAGEMENT**

Answer 3

A radiograph is essential to diagnose imperfect fusion at the midline of the premaxilla.



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**DIASTEMA & DEEP
BITE MANAGEMENT**

Question 4

What is the recommended treatment protocol for maxillary midline diastema caused by imperfect fusion of the premaxilla?



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DIASTEMA & DEEP BITE MANAGEMENT

Answer 4

Treatment involves surgical excision of fibers attached to the residual suture with osteotomy along the intermaxillary suture, performed after orthodontic closure of the diastema, allowing tissue healing and fiber remodeling.



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**DIASTEMA & DEEP
BITE MANAGEMENT**

Question 5

How can an abnormal hypertrophic or malposed upper labial frenum be diagnosed clinically?



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DIASTEMA & DEEP BITE MANAGEMENT

Answer 5

By observing an unusually wide frenum with no zone of attached gingiva along the midline or by stretching the upper lip and observing ischemia caused to the interdental papilla.



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**DIASTEMA & DEEP
BITE MANAGEMENT**

Question 6

What is the initial treatment approach for diastema caused by abnormal labial frenum attachment?



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DIASTEMA & DEEP BITE MANAGEMENT

Answer 6

The diastema should be closed orthodontically first, followed by surgical removal (frenectomy) of the frenum, with retention of orthodontic appliances during healing.



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**DIASTEMA & DEEP
BITE MANAGEMENT**

Question 7

What role do permanent canines play in the natural closure of maxillary midline diastema?



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DIASTEMA & DEEP BITE MANAGEMENT

Answer 7

The eruption of permanent canines generally leads to spontaneous closure of the maxillary midline diastema.



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**DIASTEMA & DEEP
BITE MANAGEMENT**

Question 8

What is a mesiodens, and how does it affect midline diastema?



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DIASTEMA & DEEP BITE MANAGEMENT

Answer 8

A mesiodens is a supernumerary tooth located between the roots of maxillary central incisors that can prevent their movement toward the midline and delay or obstruct diastema closure.



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**DIASTEMA & DEEP
BITE MANAGEMENT**

Question 9

What is the suggested timing for performing a frenectomy when treating maxillary midline diastema, and why?

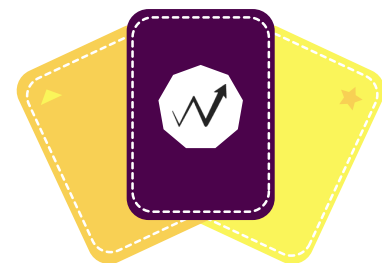


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DIASTEMA & DEEP BITE MANAGEMENT

Answer 9

The most preferred timing is after diastema closure to improve stability by allowing scar tissue to form around the surgical site; however, frenectomy can also be done just before or after closure depending on the case.

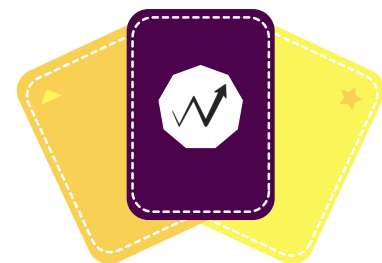


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**DIASTEMA & DEEP
BITE MANAGEMENT**

Question 10

What are the three main treatment modalities for managing deep bite malocclusion based on patient growth?



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**DIASTEMA & DEEP
BITE MANAGEMENT**

Answer 10

In growing patients: anterior intrusion, posterior eruption, or a combination of both; in non-growing patients: orthognathic surgery or anterior intrusion (posterior extrusion tends to relapse).

ORTHODONTICS

INVISALIGN



MIND MAP & CUE CARDS



BY DR. JIGYASA SHARMA

WINSPERT MIND MAP

INVISALIGN IN GROWING PATIENTS: EARLY ORTHO DONTIC TREATMENT WITH CLEAR ALIGNERS

Mixed Dentition Phase

- Mixed dentition is the coexistence of primary and permanent teeth between ages 6-12
- Crucial phase for early diagnosis and orthodontic intervention

Popularity of Aligners Among Young Patients

- Increasing demand for aligners due to non-invasiveness and aesthetic appeal
- Limited research on aligner use specifically in growing children

Challenges in Early Treatment with Aligners

- A Treatment complexity influences success and number of aligners needed
- More difficult cases require additional stages or aligners.

Efficacy of Invisalign First System

- Effective for correcting deep bite and dental crowding in growing patients
- Combined with proper treatment staging, it addresses arch form and space loss

Case Report Overview

- Example: 7-year-old male with class I dentoskeletal, dental crowding, eruption space issues.
- Post-treatment shows successful results using Invisalign First System

Introduction to Invisalign and Orthodontics

- Orthodontic aligners provide an aesthetic, comfortable alternative to traditional braces.
- Growing interest in aligner use among children with mixed and primary dentition.

Advancements in Orthodontic Techniques

- Clear aligners represent a major advancement in less invasive orthodontics
- Aligners preferred for aesthetics and comfort over fixed appliances

Benefits of Early Orthodontic Treatment

- Helps correct posterior crossbite, Class III issues, impacted teeth, excessive over jet
- Creates a favorable environment for growth, reduces future complications

Impact on Gingival and Periodontal Health

- Modern orthodontics considers effects on gum and periodontal tissue health
- Invisalign First may improve periodontal outcomes compared to traditional braces

Aesthetic and Hygiene Benefits

- Provides good aesthetics and promotes oral hygiene during treatment
- Results are stable with Invisalign First use in children

Summary and Conclusion

- Invisalign First is a valid, effective early orthodontic treatment option for children
- Offers functional, aesthetic, and periodontal benefits with minimal invasiveness



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Question 1

What is the primary advantage of orthodontic aligners in the treatment of malocclusions?

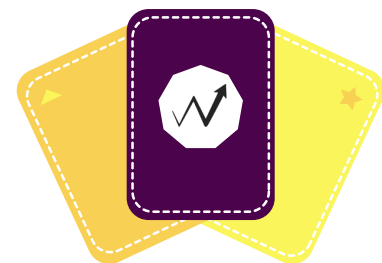


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Answer 1

Orthodontic aligners provide an aesthetically pleasing and comfortable solution for treating malocclusions.



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Question 2

What is mixed dentition and why is it important in pediatric orthodontics?



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Answer 2

Mixed dentition is the phase where primary and permanent teeth coexist, typically between ages 6 and 12, and it is crucial for early diagnosis and orthodontic intervention to prevent or correct occlusal and functional anomalies.



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Question 3

**How do clear aligners
compare to traditional fixed
appliances in orthodontic
treatment?**



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Answer 3

Clear aligners offer a more aesthetic and less invasive solution compared to traditional fixed appliances.



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Question 4

Why is the use of aligners in growing patients considered relatively unexplored?

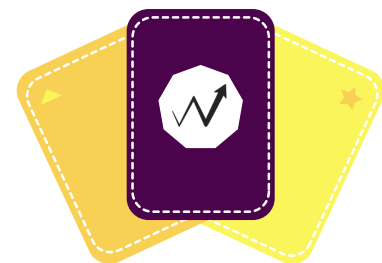


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Answer 4

Most studies on aligners have focused predominantly on adolescents and adults, with less research dedicated to their application in growing patients.



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Question 5

What orthodontic conditions can benefit from early interceptive treatment with aligners?

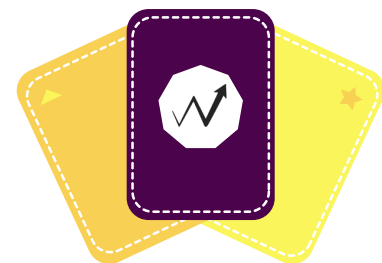


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Answer 5

Conditions such as posterior crossbite, Class III dentoskeletal issues, impacted teeth, and excessive overjet can benefit from early interceptive treatment with aligners.



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Question 6

What is the primary objective of early orthodontic treatment in growing patients?

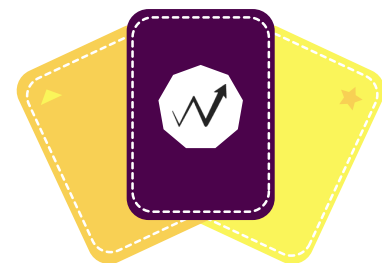


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Answer 6

The primary objective is to create a conducive growth environment, improve aesthetics, and reduce future orthodontic complexities.



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Question 7

How does treatment complexity affect the success of early orthodontic treatment with aligners?



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Answer 7

**More complex corrections require additional aligners,
which can influence the overall success of the treatment.**



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Question 8

In what way do Invisalign aligners impact gingival and periodontal health?



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Answer 8

Invisalign aligners, such as the Invisalign First System, potentially improve periodontal well-being compared to traditional fixed appliances by promoting better oral hygiene and less irritation.



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Question 9

What orthodontic issues can the Invisalign First System effectively address in growing patients?

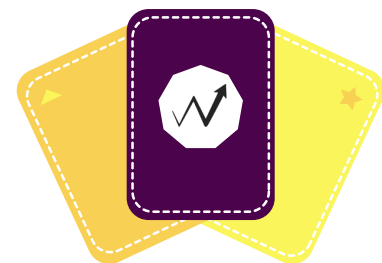


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Answer 9

The Invisalign First System effectively treats deep bite, dental crowding, arch form problems, and space loss issues, supporting normal dental eruption.



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Question 10

What are the clinical outcomes of using the Invisalign First System in a 7-year-old patient with dental crowding?



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Answer 10

The system achieves good aesthetics, proper oral hygiene, stable results, and effectively manages dentoskeletal class I malocclusion with dental crowding and inadequate eruption space.