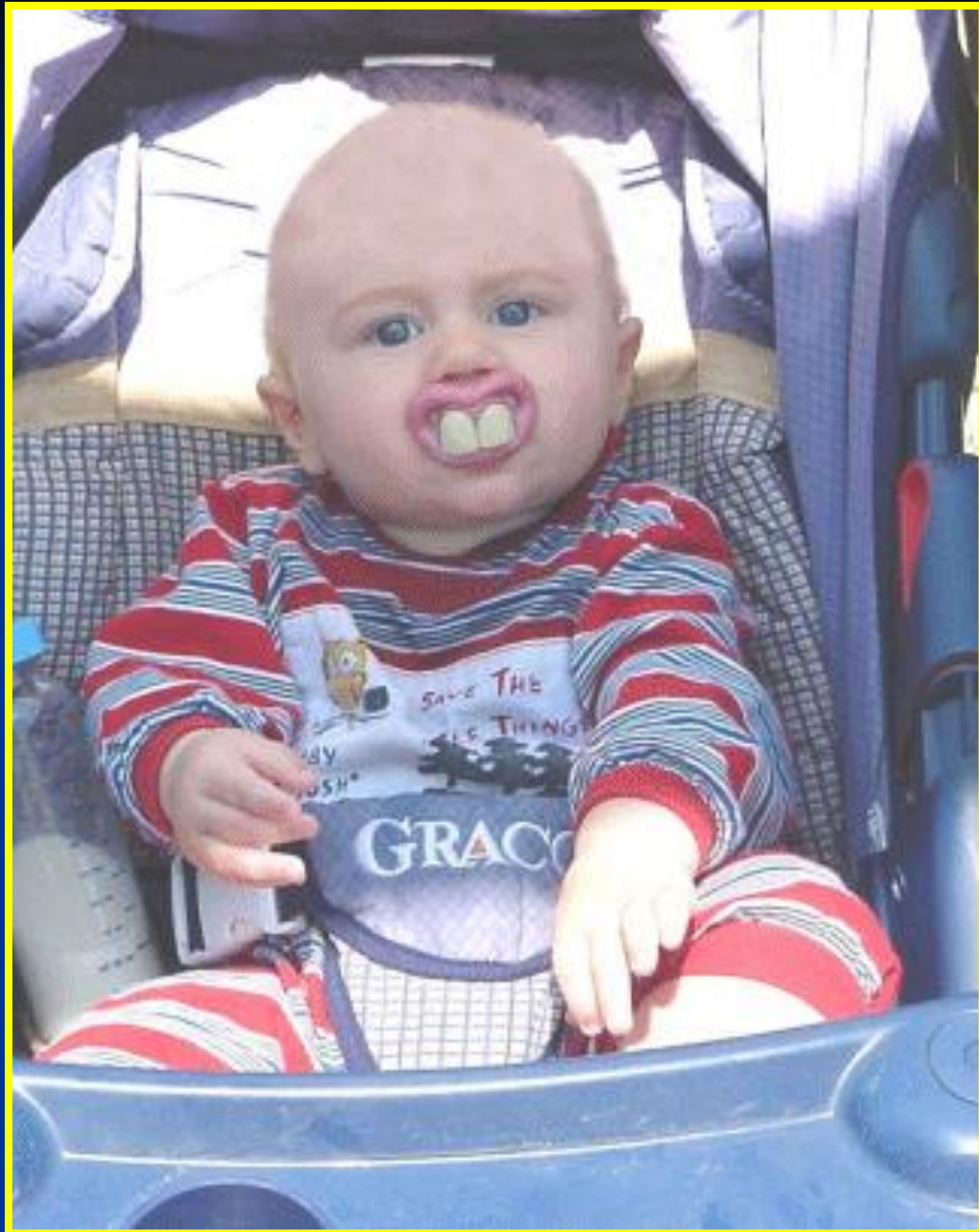




IN THE NAME OF ALLAH THE MOST  
GRACIOUS THE MOST MERCIFUL

# Teeth At Different Ages

**Dr Magdy Alabasiry**  
**Ass. Prof. of Oral Biology**  
**BDS, MS.(Egypt), Ph.D.(Egypt.)**



# Deciduous Teeth

- **E.O.** appear from 7-9 w.i.u.
- Decid. Teeth calcification begins before birth (4-6 m.i.u.).
- Only the 1<sup>st</sup> permanent molars begin calcif. At birth.
- **Eruption:** movement of developing tooth from the bony crypt to appear in the oral cavity (when crown and cervical 1/3 : 1/2 of the root are completed).

- **Sequence of eruption:** A - B - D - C - E.
- Mand. tooth precede the max. one of the same type.
- By age of 2 yrs all the decid. teeth almost erupted, but their roots are all completed by the age of 3 yrs.
- **Root formation of decid. teeth** = eruption + nearly 1 yr for inc. and 1.5 yr for canines and molars.

- **Shedding:** resorption of decid. root (by odontoclasts) due to pressure performed by the eruptive movement of its successor till the decid. tooth exfoliated to be replaced by this successor.
- **Shedding date** = eruption date of successor.

# Chronology Of Deciduous Teeth

	Beg. Of calc. (m.i.u)	Eruption (m.)	Root completed (Y)	Beginning of root res.
A   A	4	7 6	1.5	3 years before shedding (except lower canine: 1yr)
B   B	4.5	8 7		
C   C	5	18 16	3	
D   D		14 12	2.5	
E   E	6	24 20	3	

Shedding begins at 7yrs. for central incisors & ends at 10yrs. for 2<sup>nd</sup> molars

# Permanent Teeth

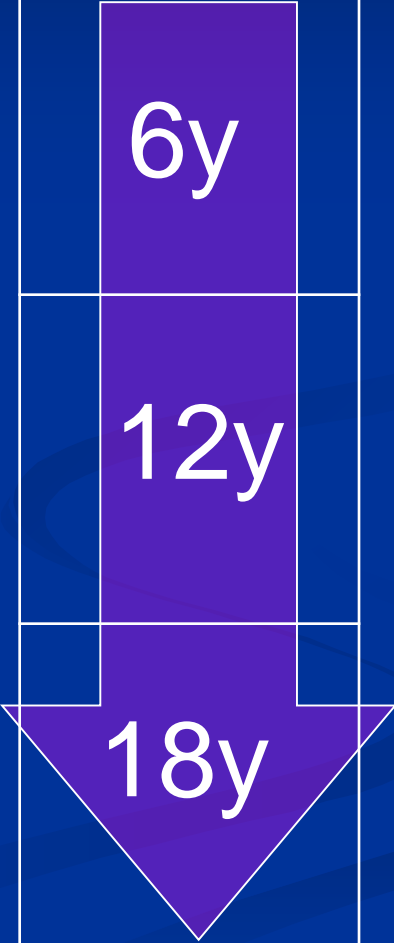
- **E. O.** appear from 4 m.i.u. (1<sup>st</sup> M) to 4yrs (3<sup>rd</sup> M).
- **Sequence of eruption:**
  - 6 - 1 - 2 - 3 - 4 - 5 - 7 - 8 (in mandible).
  - 6 - 1 - 2 - 4 - 5 - 3 - 7 - 8 (in maxilla)
- **Crown completed** = 3 yrs before eruption.
- **Root formation** = eruption + 3 yrs.
- Date of eruption of permanent incisors is almost the same as decid. inc. but in years.

- Canines erupt after 1<sup>st</sup> molars.
- Premolars start calcification between 1 ½ : 2 ½ yrs.
- First, second, and third molars erupt at ages of 6, 12, and 18 yrs, respectively.
- At early dates of eruption **X-ray** examination to the jaws can help to know the condition of the teeth before eruption.

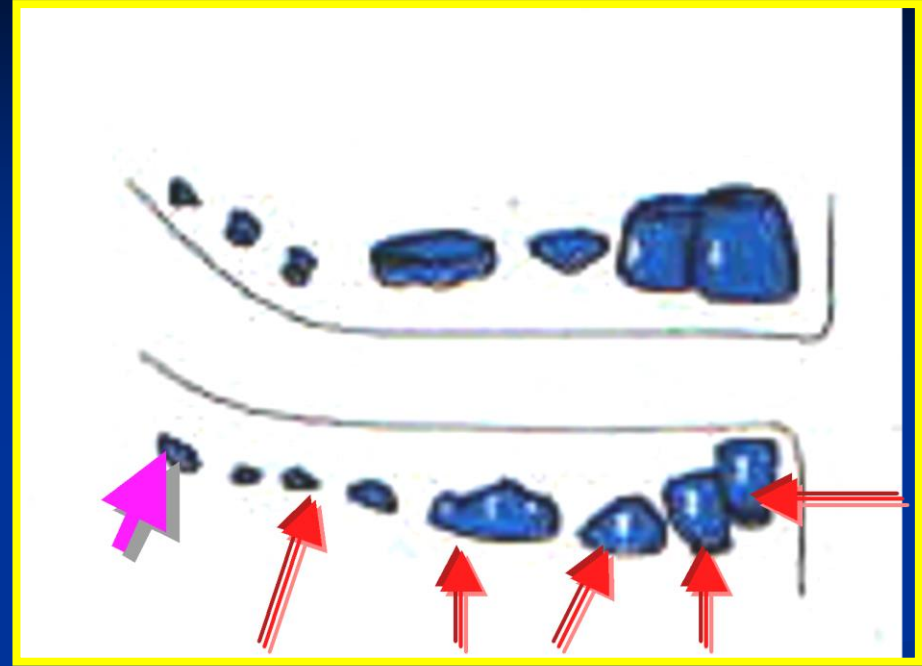
# **Chronology Of Permanent Teeth**

Tooth	Beginning of calc. (month)	Crown completed	Eruption	Root completed
$\frac{1}{1}$	3-4	4-5 years	<div style="background-color: yellow; padding: 5px; text-align: center;">7</div> <div style="background-color: red; padding: 5px; text-align: center;">6</div>	+ 3 years
$\frac{2}{2}$	<p style="color: yellow;">10-12</p> <p>3-4</p>		<div style="background-color: yellow; padding: 5px; text-align: center;">8</div> <div style="background-color: yellow; padding: 5px; text-align: center;">7</div>	
$\frac{3}{3}$	4-5	6-7 years	<div style="background-color: magenta; padding: 5px; text-align: center;">11</div> <div style="background-color: teal; padding: 5px; text-align: center;">9</div>	

Tooth	Beginning of calc.	Crown completed	Eruption	Root completed
4   4	1 $\frac{1}{2}$ 1 $\frac{3}{4}$	5-7 years	10 10	3 years
5   5	2 2 $\frac{1}{4}$		11-12 11-12	

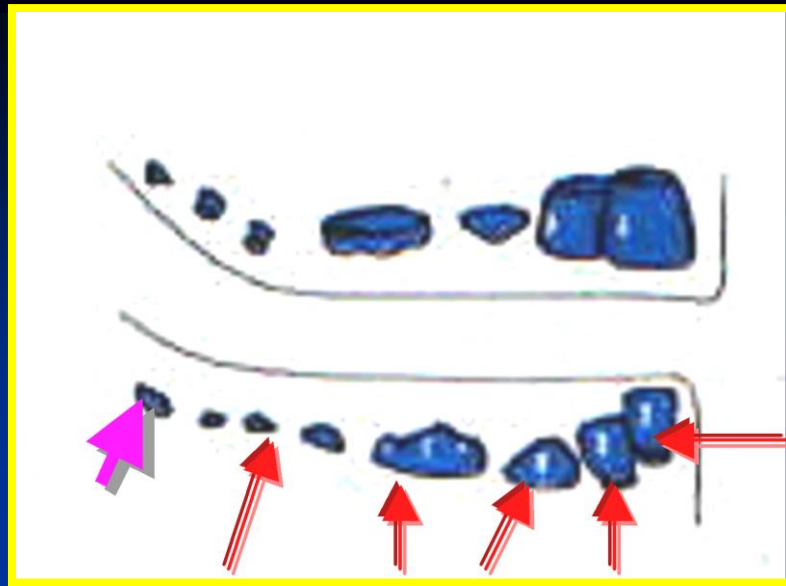
Tooth	Beginning of calc.	Crown completed	Eruption	Root completed
$\begin{array}{c} 6 \\ \hline 6 \end{array}$	At birth	<i>3-4 years before eruption</i>		<i>3 years after eruption</i>
$\begin{array}{c} 7 \\ \hline 7 \end{array}$	3y			
$\begin{array}{c} 8 \\ \hline 8 \end{array}$	8y			

- No erupted teeth.
- X-ray examination reveals the the different amount of calcified teeth structures.
- The roof of the bony crypts are widely opened at birth so that these calcified parts may fall out of the dried specimen.
- Nearly after 15 days the edges of the bony crypts have grown and formed roofs (tooth parts will not drop out).



# At birth

# At birth



- A More than  $\frac{1}{2}$  of crown is formed
- B Half of crown is formed
- C Just cusp tip is formed
- D Occlusal surface is formed (united cusps)
- E Separate cusps are formed
- 6 ML cusp only is formed

Beg. Of calcification.....at birth.....Date of eruption

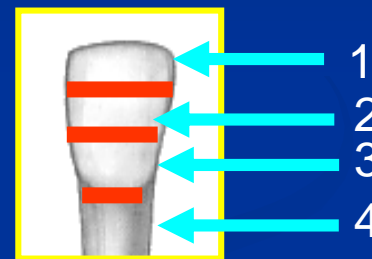
$\bar{A}$  4MIU.....9 M.....6M

5M + 6M = 11 M

11 M is needed for formation of crown and 1/3 root

11 M divided by 4 = 2.75 ~2.8m

At birth About 1/2 crown is formed



Beg. Of calcification.....at birth.....Date of eruption

$\bar{B}$  4.5MIU..... 9M..... 7M  
4.5M + 7M = 11.5M

11.5 divided by 4 = 2.87~ 2.9 M

So at birth less than 1/2 of crown is formed

$\bar{C}$  5MIU.....9M.....16M  
4M + 16M = 20 M

20 M divided by 4 = 5 M

So at birth just cusp tip is formed

Beg. Of calcification.....at birth.....Date of eruption

$\overline{D}$  5MIU.....9M.....12M

4M + 12M = 16M

16M is divided by 4 = 4 M

So at birth occlusal surface is formed

$\overline{E}$  6MIU.....9M.....20M

3M + 20 M = 23M

23 M is divided by 4 = 5.75M~6M

So at birth seperate cusps are formed

Beg. Of calcification (at birth).....Date of eruption

—

6

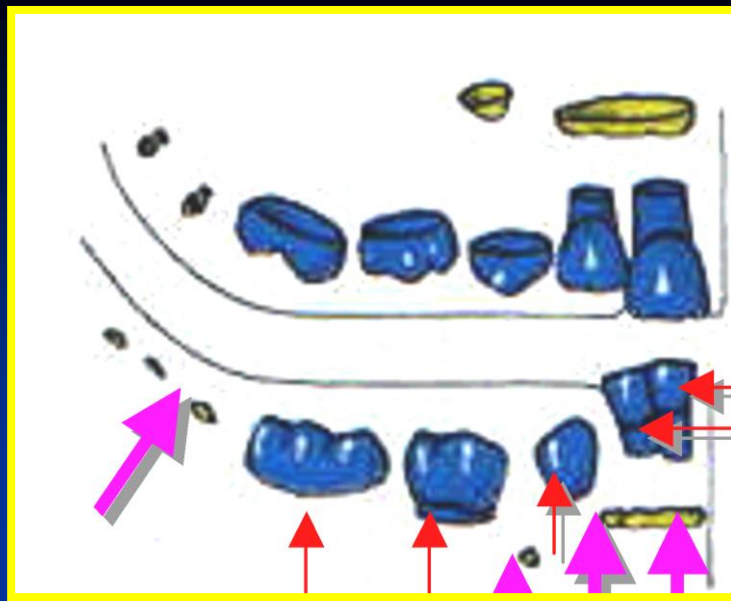
9M .....6M

So at birth

ML cusp only is formed

# 6 months

## Deciduous teeth



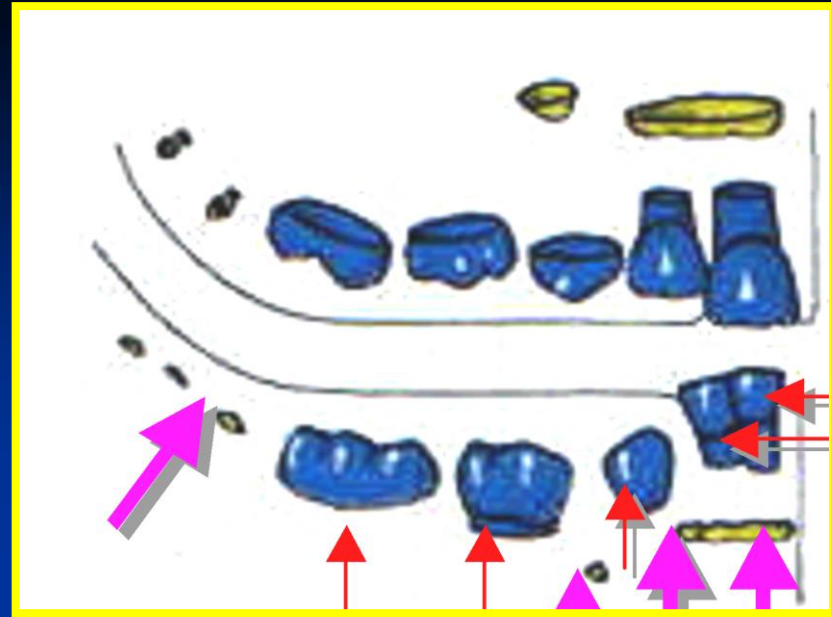
- A Starts to erupt with 1/3 of root is formed.
- B The crown and small portion of the root is formed.
- C 2/3 of the crown is formed.
- D More than 2/3 of the crown is formed.
- E Less than 2/3 of the crown is formed.



6 months

# 6 months

## Permanent teeth



- 1 Incisal 1/3 is formed.
- 2 Incisal 1/3 is formed.
- 3 Tip of the cusp is formed.
- 6 Separate cusps is formed.

(Note : the 2 shows beginning of calcif. At 10-12 mon.).

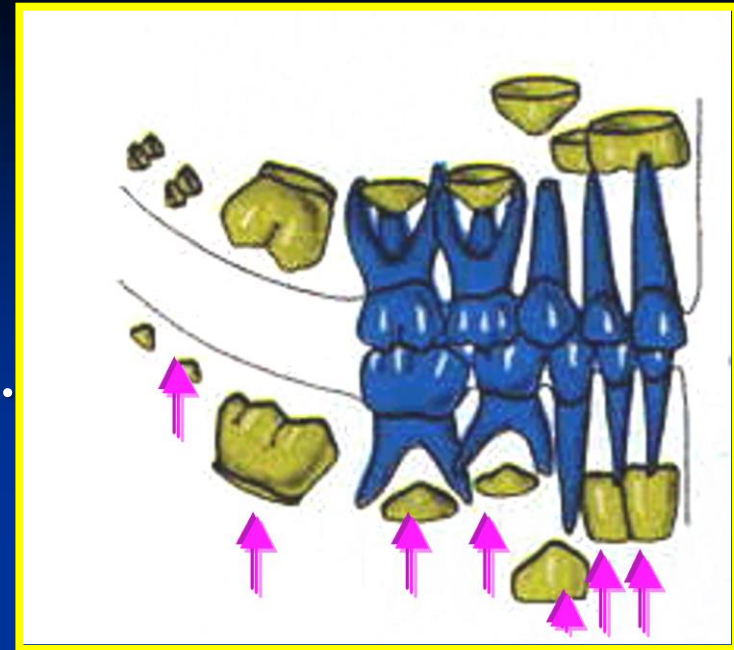
# 3 years

## ■ Deciduous teeth

All are erupted with fully formed roots.  
(Teeth are in occlusion).

## ■ Permanent teeth

1. More than  $\frac{2}{3}$  of the crown is formed (1.3y each third).
2. Less than  $\frac{2}{3}$  of the crown is formed (1.6y each third).
3. More than  $\frac{1}{3}$  crown is formed (2y each third).
4. About  $\frac{1}{3}$  crown is formed (2y each third).
5. Small part of the crown is formed (2.3 y each third).
6. Crown is completed.
7. Crown begins to calcify so separate cusps are formed.





3 years

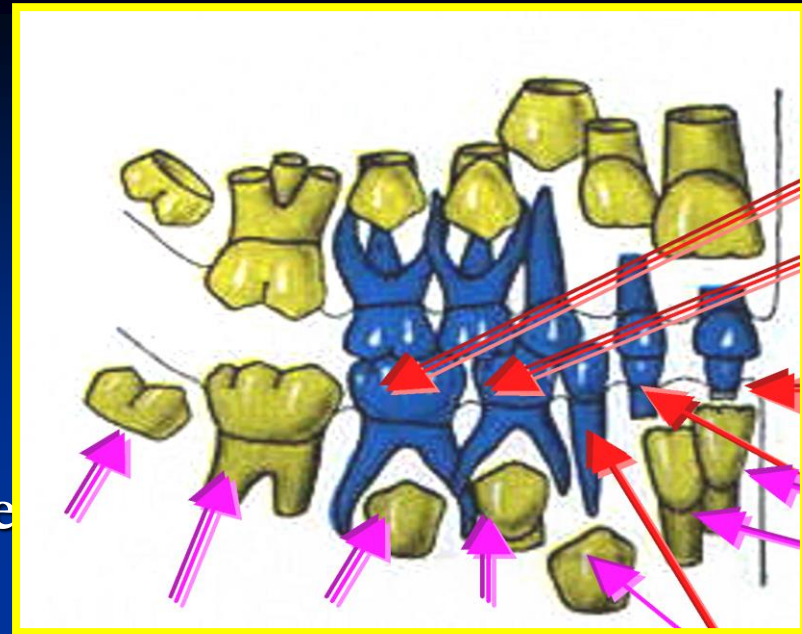
# 6 years

## ■ Deciduous teeth

- A shows root resorption and may be shedded and replaced by 1.
- B and D show different amount of root resorption.
- C and E don't show any root resorption.

## ■ Permanent teeth

- 1 may be erupted and has 1/3 of its root is formed.
- 2 has less than 1/3 of its root is formed.
- 3 , 4 , and 5 have their crowns may be completed.
- 6 is erupted with 1/3 of its root is formed.
- 7 its crown is not yet completed.

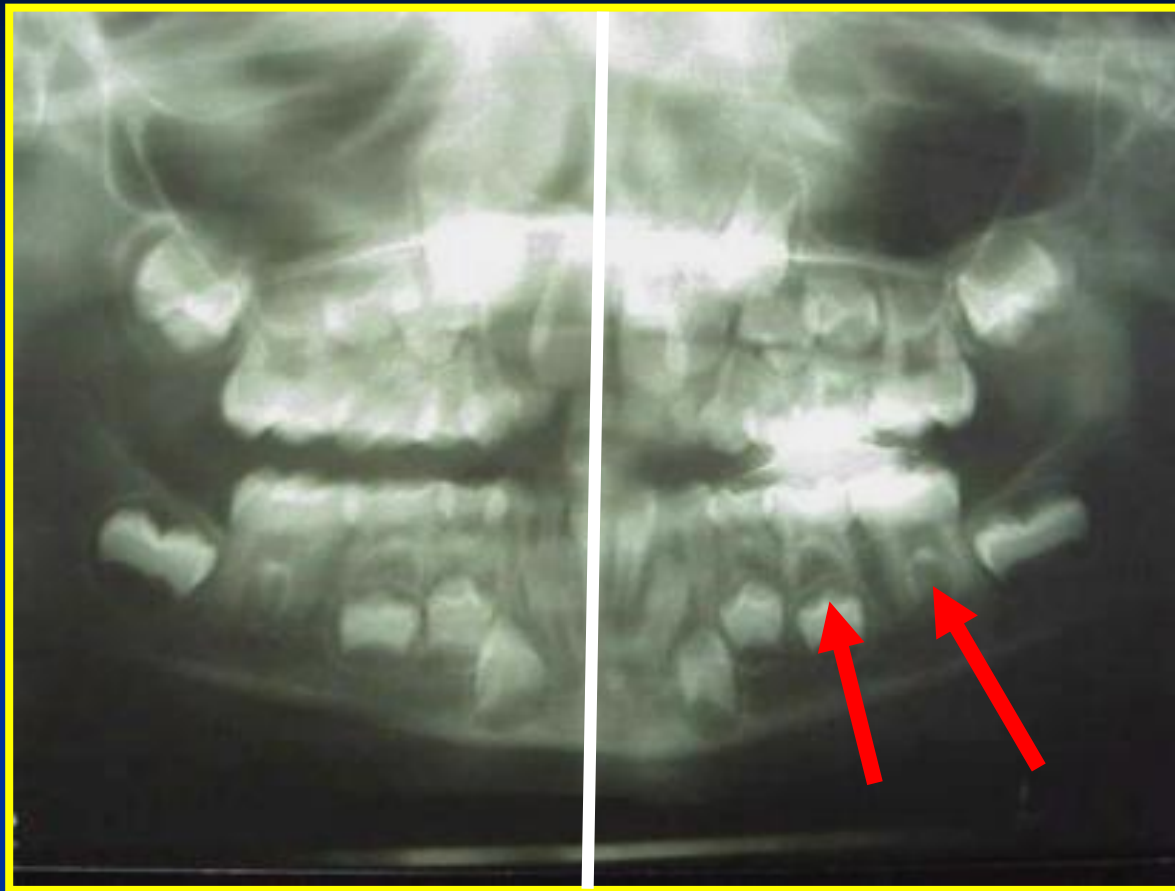




7 years



7 years



7 years



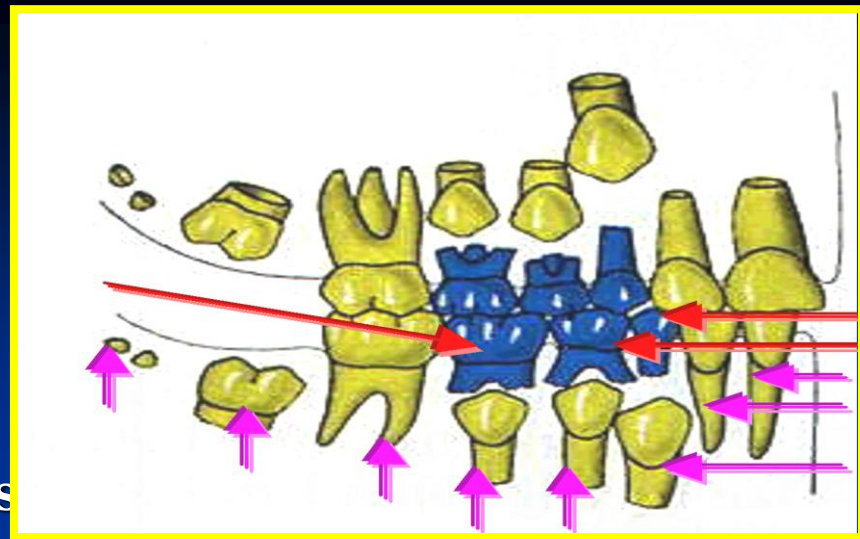
7-8 years

# 9 years

## ■ Deciduous teeth

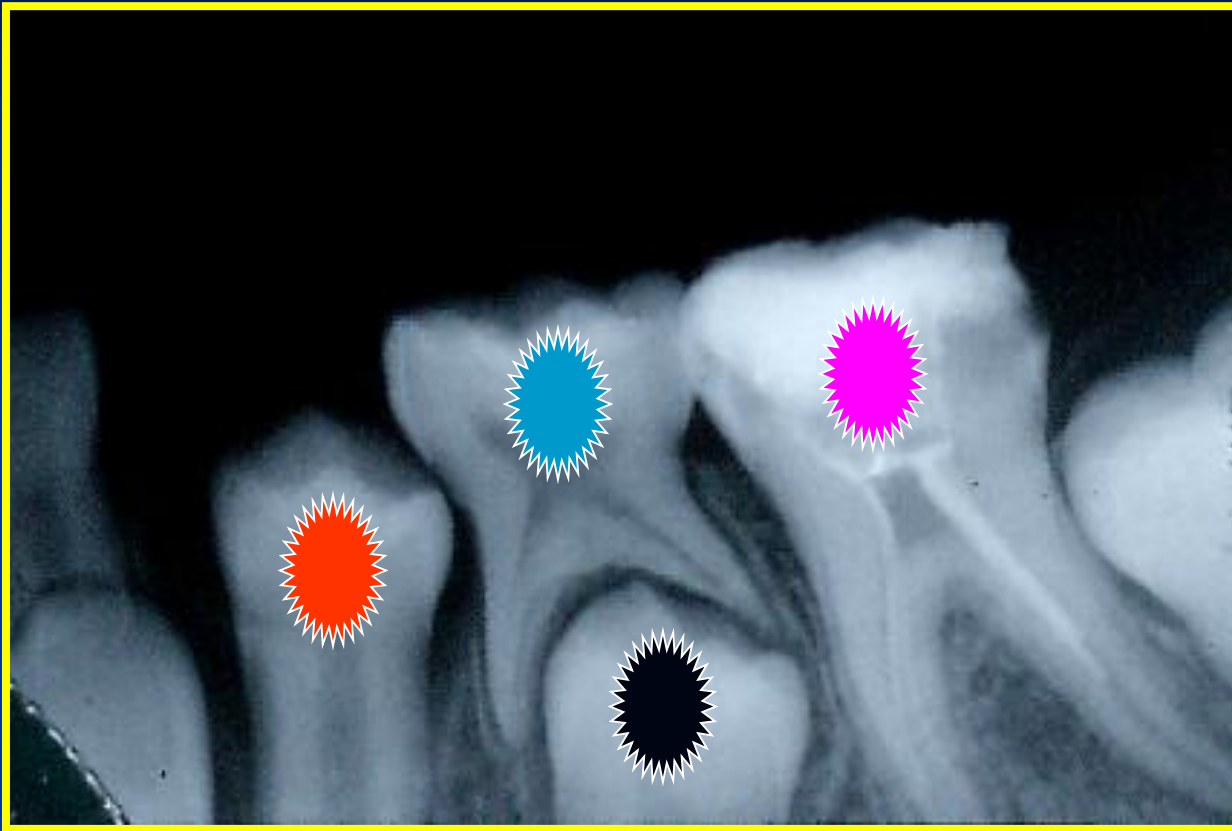
All the incisors are shedded

While in molars most of their roots show resorption (shedding of E at 10 yr).

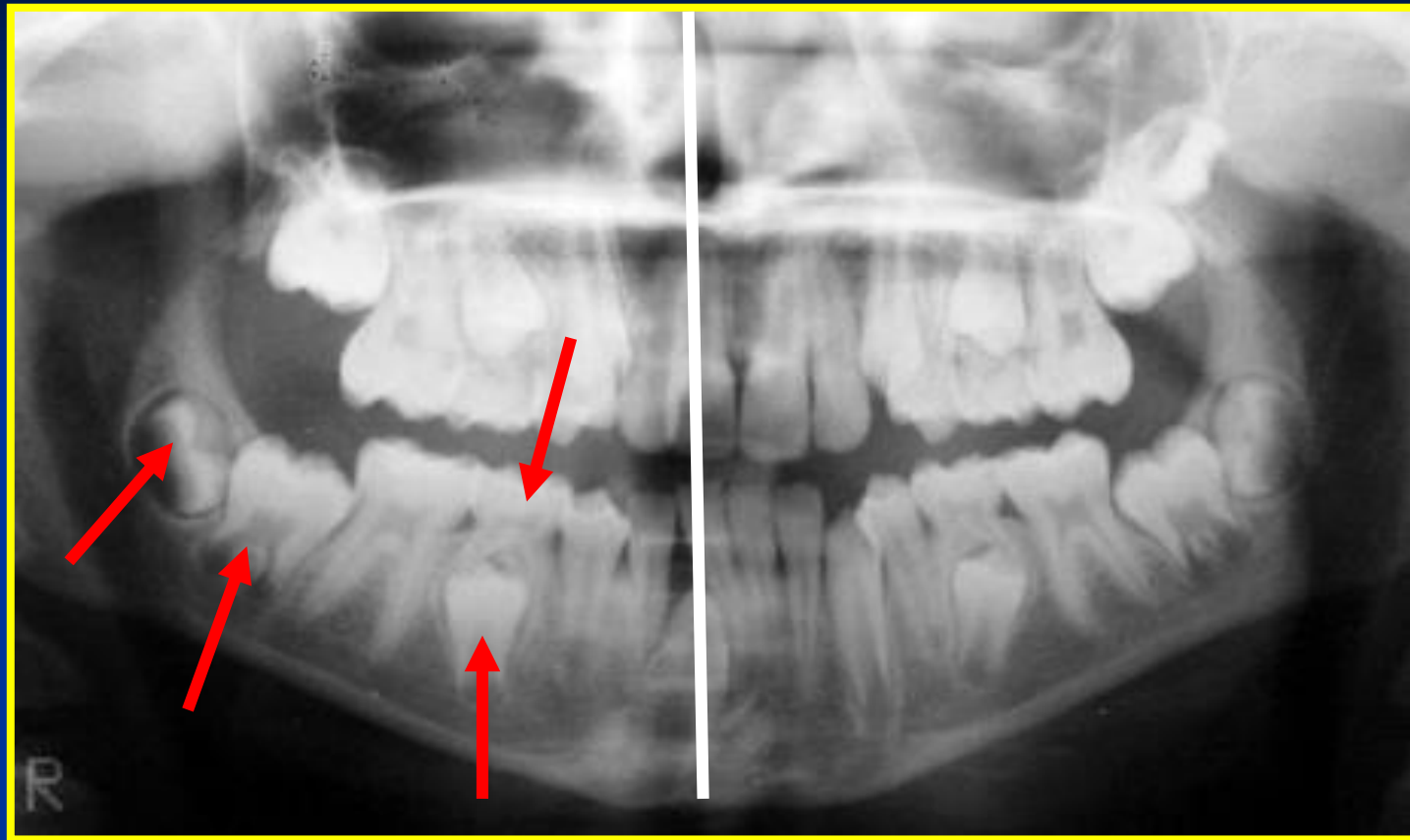


## ■ Permanent teeth

1. Is erupted and its root is completed.
2. Is erupted and most of its root is formed but not completed.
3. May be erupted with 1/3 of its root (may erupt at 12 yr).
- 4., 5 not yet erupted and less than 1/3 of their roots are formed.
- 6 Is erupted and its root are completed.
- 7 Shows crown completion and small part of its roots is formed.
- 8 Begins to be calcified ( calcified separate cusps are shown).

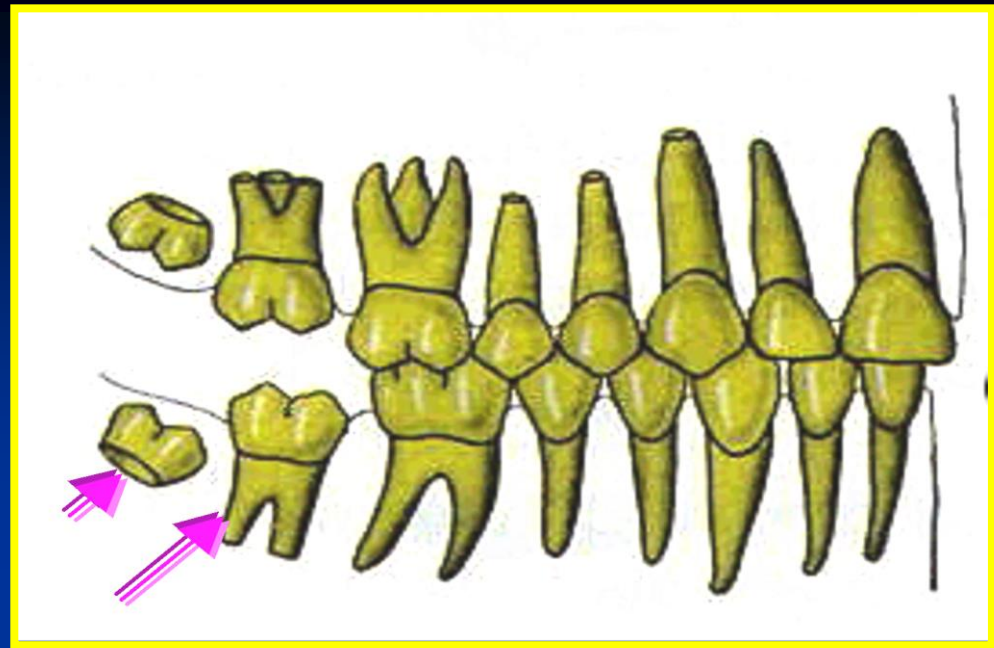


10 years



10-11 years

**12 years**



- Deciduous teeth

All are shedded and if any deciduous tooth remains after this age it is consider to be retained deciduous tooth.

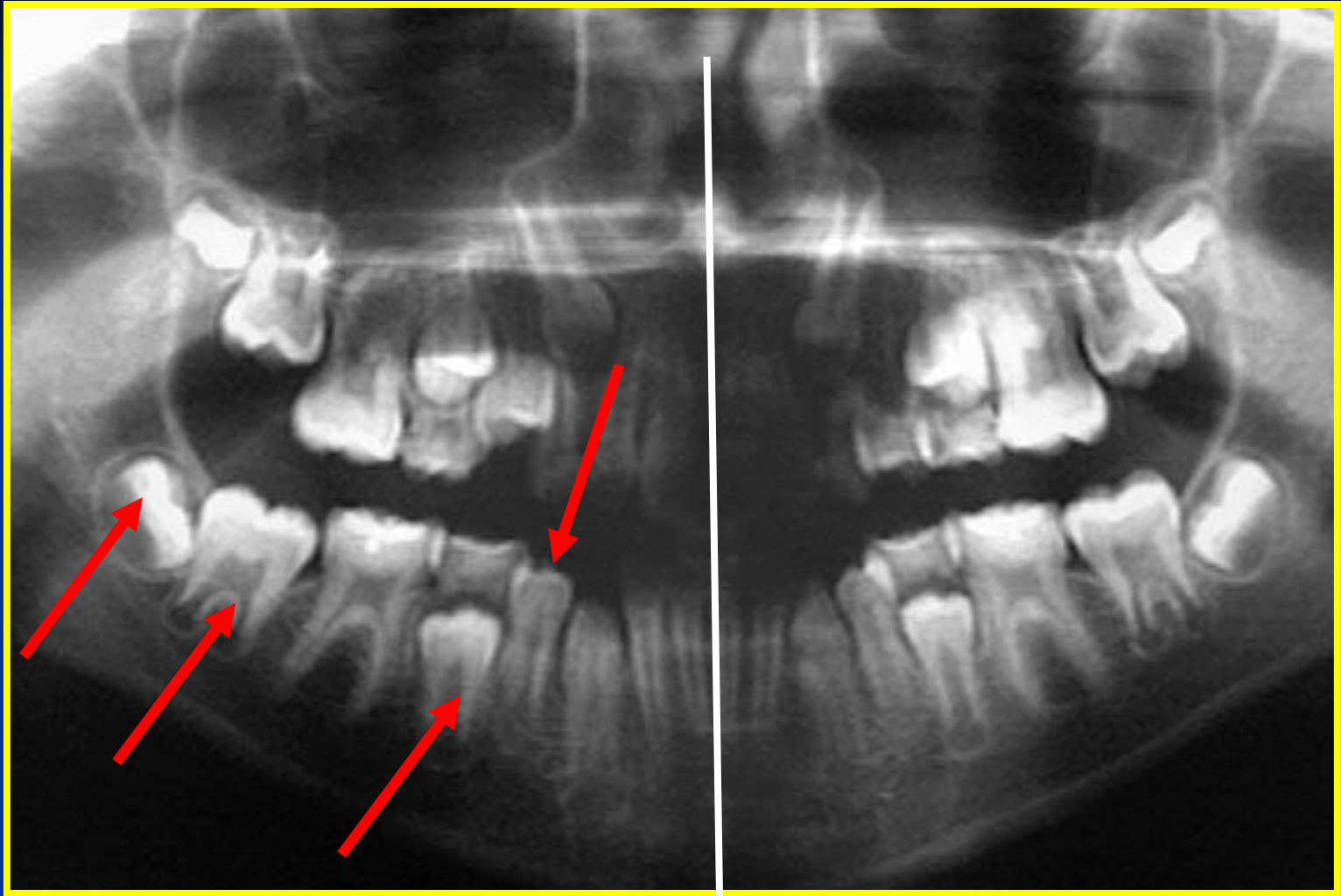
- Permanent teeth

All are erupted(except the 8).

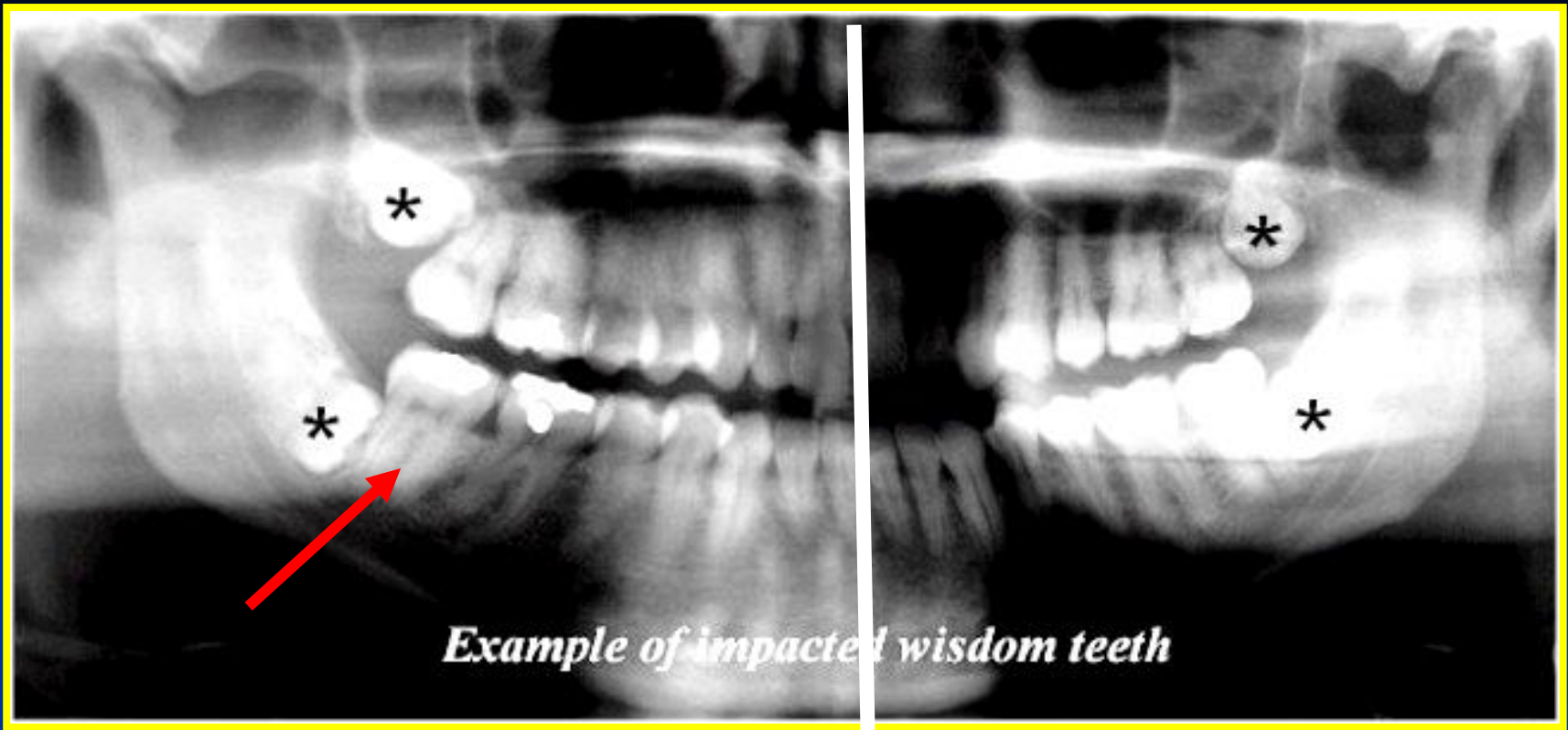
All have completed roots (except 7 which has 1/3 of its roots is formed).



12 years



12 years



*Example of impacted wisdom teeth*

More than 15 years

Thank you and any question ?

