

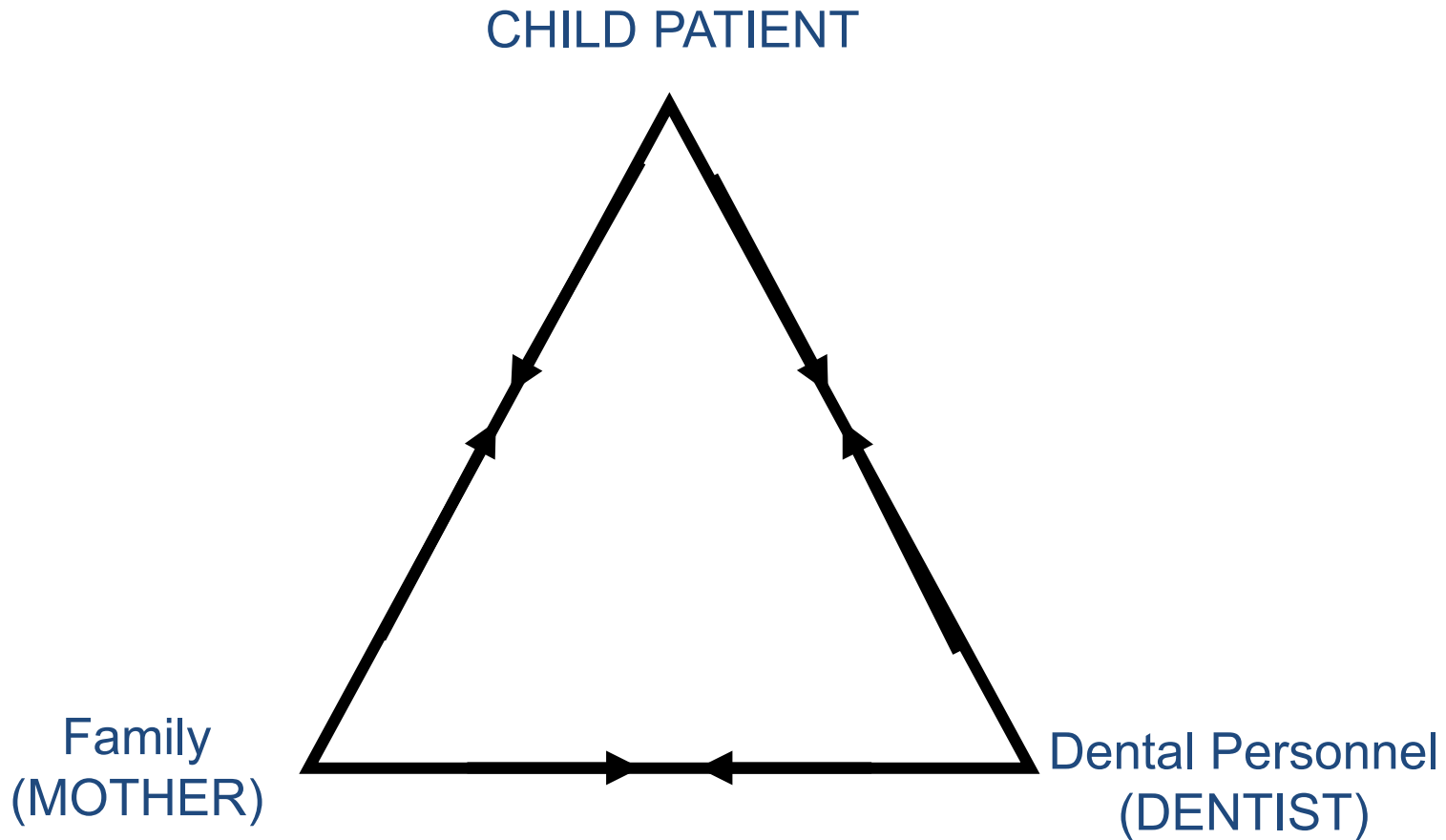
DEFINITION

Pediatric Dentistry can be defined as the practice and teaching of Comprehensive, Preventive and Therapeutic oral health care for children from birth to adolescence.

Aims of Treating Children

- *Provide a positive introduction to dentistry*
- *Provide child with the skills necessary to accept dental treatment*
- *Institute good preventive practice*
- *Provide any necessary restorative care in a planned and organized fashion.*

The Paedodontic Treatment Triangle



Adapted from GZ Wright

Aims of Management

- Diagnose and treat pathology and pain
- Provide aesthetics
- Maintain occlusal function
- Maintain vertical dimension

Sound Patient Management

- Effective communication
- Thorough history and assessment
- Appropriate case selection
- Careful treatment planning
- Effective behaviour management strategies
- Effective pain control
- Minimise need for re-treatment

Patient Management

Management of the patient, **Not Just** the condition

Medical History

- Birth and neonatal complications
- Past and recent medical history

Social History: Family Circumstance

Diet History: Previous, recent changes

Oral Hygiene Practices

Special considerations in children:

- The child is a dependant
- Emotional maturity and cooperative ability
- Growth and development
- Dental development

Treatment Planning

Many Factors to consider, including

- Cooperative ability
- Medical History
- Disease control
- Caries risk
- Age appropriate preventive strategies
- Growth, development
- Family History
- Environmental causes
- Time to exfoliation
- Genetic predisposition

Primary vs Permanent Teeth

The primary dentition has significant morphological differences to the permanent dentition that will impact on cavity design:

- Small size
- Bulbous crowns
- Thinner enamel and dentine
- Prominent pulp horns

Avoiding pulp exposure is more difficult!

NEED FOR EARLY DENTAL CARE

- Intercept developing malocclusion
- Identify and treat early caries
- Preventive treatment at an early stage
- Teach concept of good oral health to parents and children at a early stage.

Effective communication

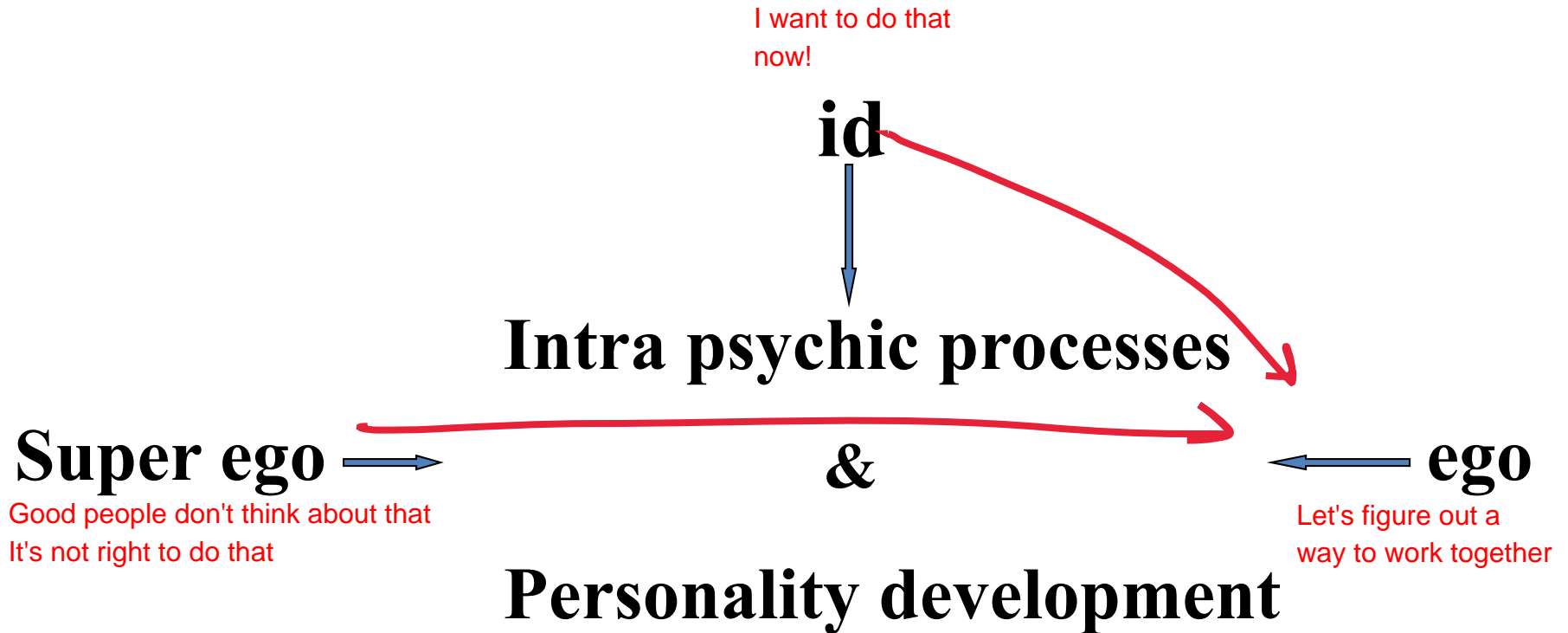
Establishing communication with the child is one of the first objectives in behaviour management

This requires assessment of child's behaviour

THEORIES

- Psychodynamic – Freud Psychoanalytic & Psychosexual theory
- Psychosocial – Erikson
- Hierarchy of needs – Abraham Maslow
- Theory of cognitive development
Piaget
- Behavior learning theories

Psychoanalytic theory



Id : Pleasure principle

Ego : Reality principle

Super ego : Perfection

Id

- **Basic biologic impulse**
- **Governed by pleasure principle**
- **Need to eat, drink, avoid pain & reproduce**
- **Necessary for the survival of the species**

I want a car now!

Ego

- **Reality principle**
- **Gratification of impulses is delayed until the appropriate conditions are found**
- **Essential executive of the personality**

I'll save money until I can
buy a car

Super ego

- Internalized representation of the value and morals of the society
- Judges right and wrong action
- Strive for perfection

I don't have money, I shouldn't
buy a car

PSYCHOSEXUAL DEVELOPMENT

Freud

STAGES OF DEVELOPMENT

- **Oral**
- **Anal**
- **Phallic**
- **Latency**
- **Genital**

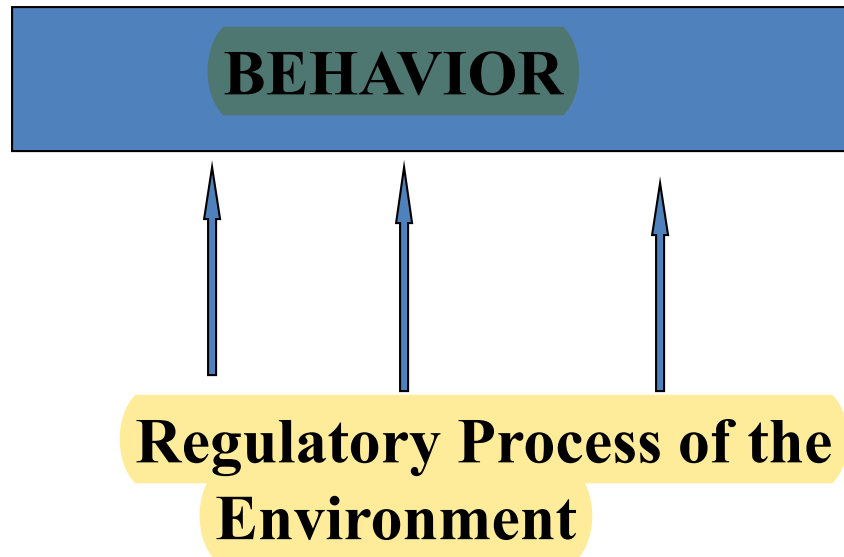
ORAL STAGE

- First year of life
- Characterized by passiveness and dependency

ANAL STAGE

Age : 1 to 3 years

Based on reality principal



Anal Stage

Terrible two characterized by
negativism

Language skills by 18 months
- 1.5 years

Mastery over skills

PHALLIC STAGE

Age from 3 to 6 years

Curiosity of the anatomical differences

Sexual identity develops

Mutilation anxiety

خوف من الإنتحار

LATENCY STAGE

Age 6 to 12 years

Care free and untroubled years

Acquiring new knowledge.

**Cognitive skills like Mathematical ,
Spoken & Written language develops.**

**Physical changes in the body take
place at about 11 to 12 years.**

GENITAL STAGE 12 TO 18 YEARS

Adolescence starts with the onset of puberty

Ends



Accomplishment of Developmental task

GENITAL STAGE
IS FURTHER DIVIDED INTO

- Early adolescence
- Middle adolescence
- Late adolescence

EARLY ADOLESCENCE

12 to 14 years in girls

13 to 15 years in boys

Group activities and sports

MIDDLE ADOLESCENCE

turmoil of adolescence

Age 14 to 16 years

- Intellectualization & New ideas
- Frees dependent ties

LATE ADOLESCENCE

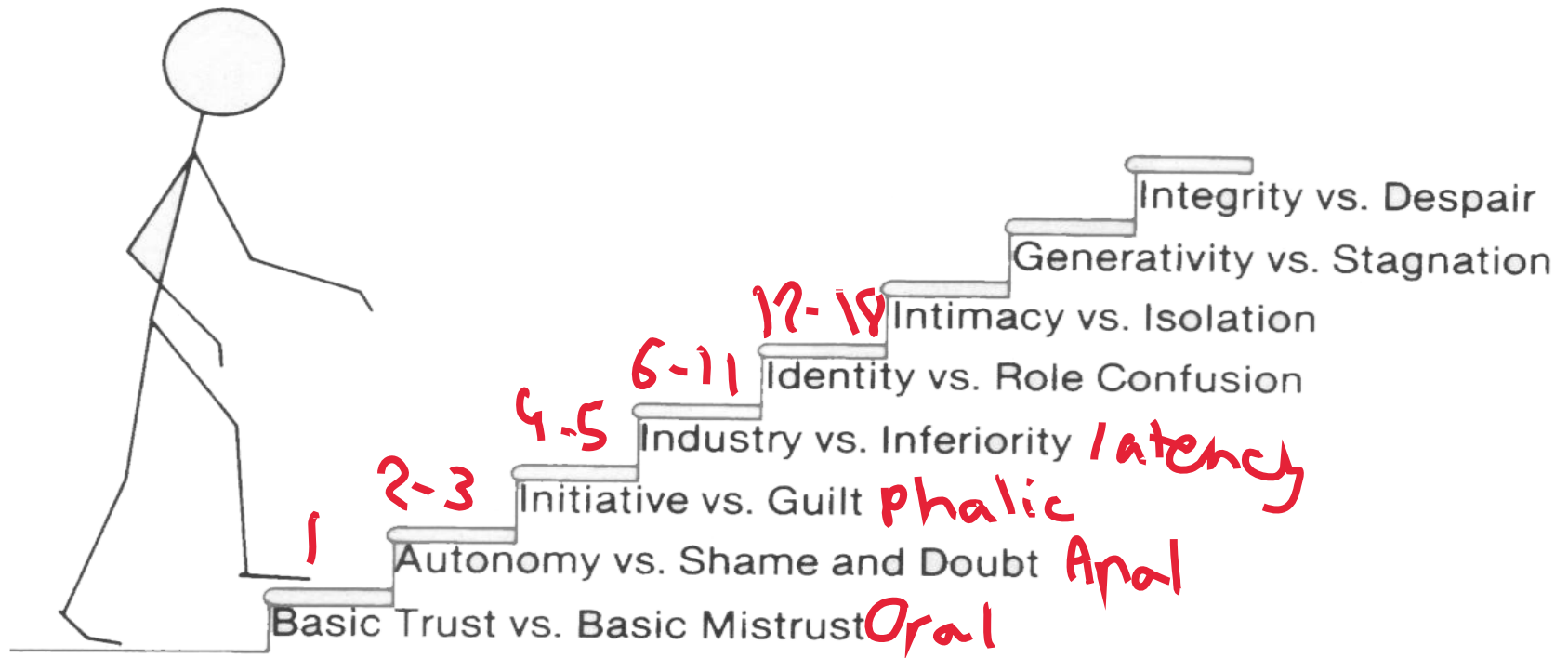
Age 17 to 18 years

- Ego identity

PSYCHOSOCIAL THORY

Erikson

ERIKSON'S "EIGHT AGES OF MAN"



Trust vs Mistrust : Satisfy needs -> Trust (Child will fear separation from trusted people)

Autonomy vs Shame : Child achieving something by himself -> Autonomy (later in life not dependent) => Child must think that what the dentist is doing is based on his opinion

Initiative vs Guilt: Child tries to do new things (if faced with shame and hitting -> guilt) => First child visit to dentist he wants to be successful

Industry vs Inferiority: Industry is when child achieves something, inferiority is when parents say (what the fuck are you doing) => Best time to do ortho treatment because child wants to achieve nice teeth

Identity vs role confusion: Thinks they can take decision by their own => They should decided to do ortho and not parents.

1-year

Trust vs Mistrust (Oral stage)

Needs are met – Trust

Inconsistent care - Mistrust

Trust ----- Mistrust

Mistrust ---- Trust

Dental – Separation anxiety

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Autonomy vs Doubt

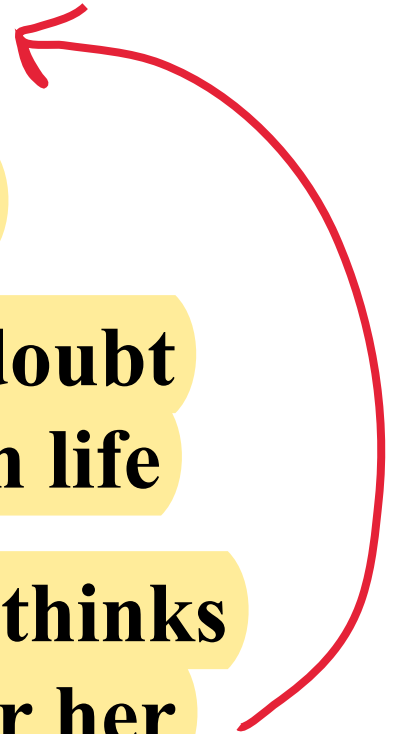
2 to 3 Years (Anal stage)

New accomplishments – Autonomy

Do every thing for the child – Doubt

**Child with autonomy outbalancing doubt
will be prepared to be autonomous in life**

**Dental management – Child should thinks
that what the dentist is doing is his or her
choice.**



Initiative vs Guilt

4 to 5 Years (Phallic stage)

Initiative – Motor activities & Intellectual initiative

Guilt – Made to feel that certain activities are bad, silly or stupid.

Dental Management – First dental visit is challenging for the child hence he or she wants to be successful.

Industry vs Inferiority

6 to 11 Years (Latency)

Industry – Encouraged to finish an effort.

Inferiority – Efforts are considered as making a mess by parents.

Dental Management – Orthodontic treatment is started in this stage as children in this stage are learning skills and defines success in situation including dental office.

Identity vs Role confusion

12 to 18 years

- Mature mentally as well as physiologically
- Capable of constructing theories and philosophies
- New interpersonal dimension emerging has

Ego identity

(+ end)



Role confusion

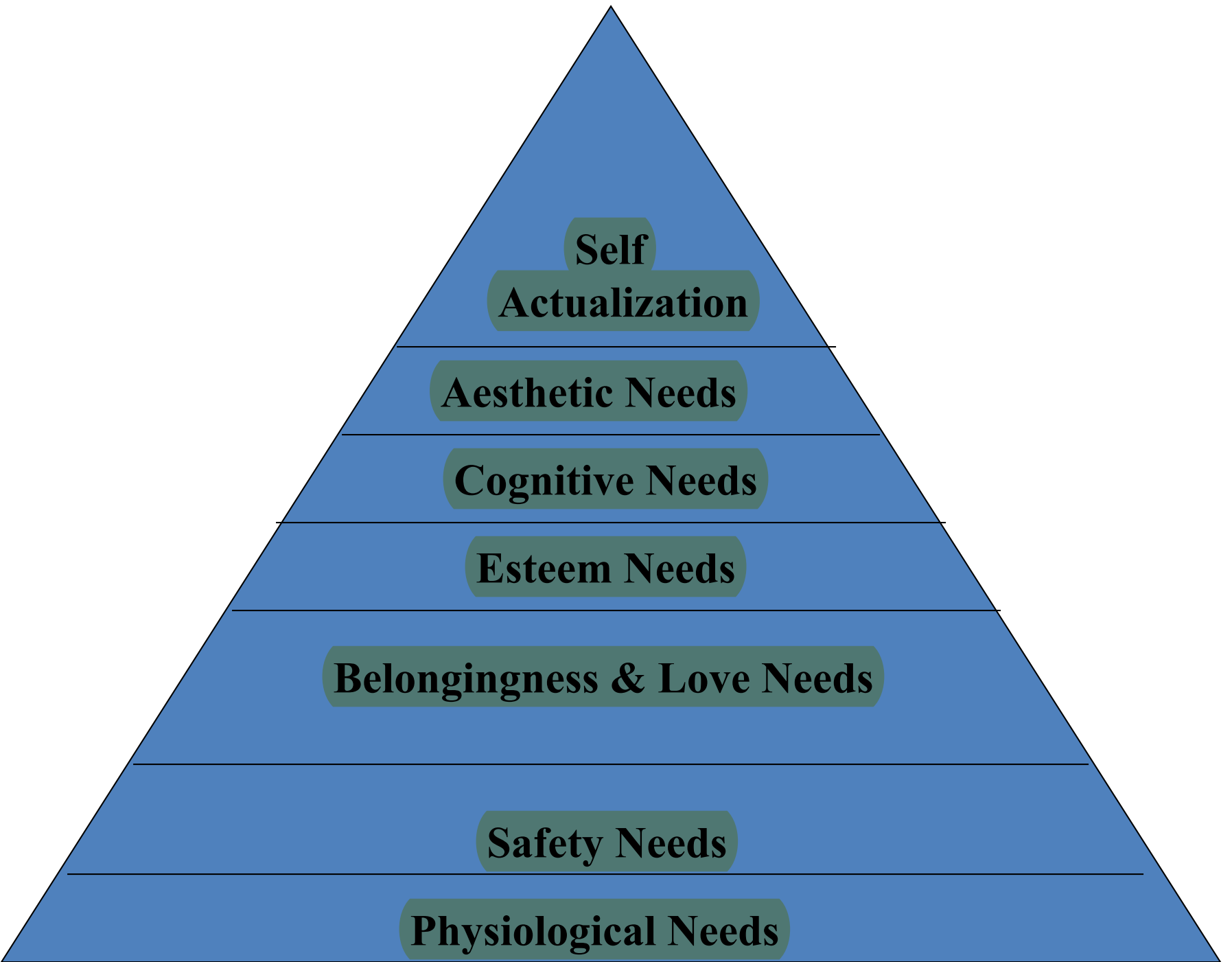
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Dental: Ortho treatment done only when child want it.

Thank you Next lecture

Hierarchy of Needs

Abraham Maslow



Characteristics Of Self Actualization

- Perceive and accept reality
- Spontaneous in thoughts
- Problem centered
- Humor
- Creative
- Welfare of humanity
- Inter personal relationship

Behaviors of the persons who have attained self actualization

- Try something new
- Work hard
- Honest
- Assume responsibility
- Work at whatever you decide to do

Cognitive Development

Jean piaget

Terminologies

- **Operations**
- **Assimilation**
- **Accommodation**
- **Equilibrium**

Four major stages

Sensorimotor

Birth – 2 Yrs

**Pre -
operational**

2 – 7 Yrs

**Concrete
operation**

7 – 11 Yrs

**Formal
operation**

**11 Yrs to
Adult**

Sensorimotor Schemes

Birth to 2 Years

Class of motor action used to obtain a goal

Intellectual development – In stages

Development of object concept

2 to 3 months – Observes object.

3 to 6 months – Grab the object

6 to 11 months – Reach out for hidden object.

Permanence of the object

Pre operational stage

2 to 7 Years

- Reproducing action seen in the past
- Imaginative: Eg. Toy as symbols of persons
- Ego centric

Dental Implication

- **Dental staff use immediate sensation rather than abstract reasoning**
- **E.g. 1. O. H. I**
- **E.g. 2. Thumb sucking**

Concrete Operation

Perform mental operations which are



```
graph TD; A[ ] --> B[Flexible]; A --> C[Reversible];
```

Flexible

Reversible

De center

At this stage the children develop a concept that any objects has its dimension like height, weight and length.

Conservation

- Liquid
- Substance
- Number

Perform reversible mental operation

Identity length

$$A = B$$

$$B = C$$

Child in this stage will be able to say

$$A = C$$

Other functions in this stage

Relational thinking

e.g. **Darker, taller & shorter**

Class inclusion (Reason part & Whole)

e.g. **8 Yellow candy & 4 brown candy (Child age 8)**

Dental Implication

**Explanation should be
illustrative not abstract**

e.g. Retainer

↓
don't summarize

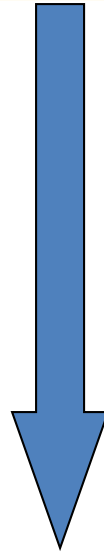
Period of formal operation- 11 years

- **Solving problems**
- **Can see things from a number of perspectives.**
- **Systematic search for solution**
- **Deals with abstract concepts**
- **Understand concept of health, disease & prevention**

CLASSIC CONDITIONING

Ivan Pavlov

Unassociated stimuli produces



Reflexive behavior



Pavlov's Experiment

Food (initial)  Salivation (unconditioned)

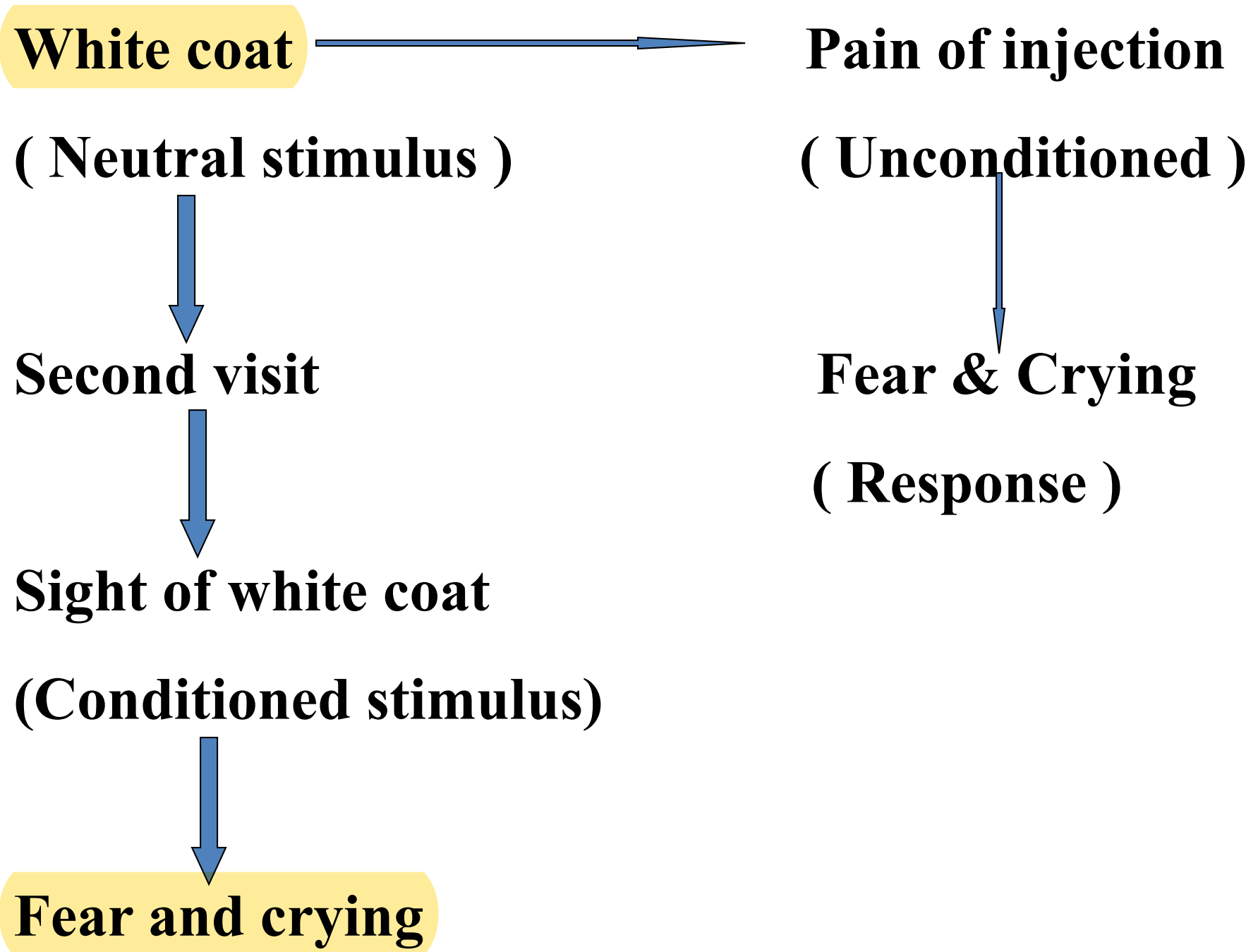
Food (initial) + Bell (Neutral)  Salivation


Bell (Neutral)  Salivation (Conditioned)

Classic conditioning operates by:

**Association of one stimulus
with other**


**Mode of learning : Learning
by association**



Hand piece sound  Anxiety
(Initial stimulus) (Unconditioned)

+

Dentist (Neutral)

Dentist (Neutral)  Anxiety (Conditioned)

Reinforced – when there is association between the conditioned and unconditioned stimulus.

Extinction – When there is no association

Dental Management

- **Dentist office should look different**
- **Dentist should have a different appearance**
- **Childs first dental visit should be different**

Operant Conditioning

Skinner

Basic types of Operant Conditioning

Stimulus	Response	Response
Pleasant (S 1)	S 1 Present Positive reinforcement	S 1 Withdrawn Omission
Unpleasant (S 2)	S 2 withdrawn Negative reinforcement	S 2 Present Punishment

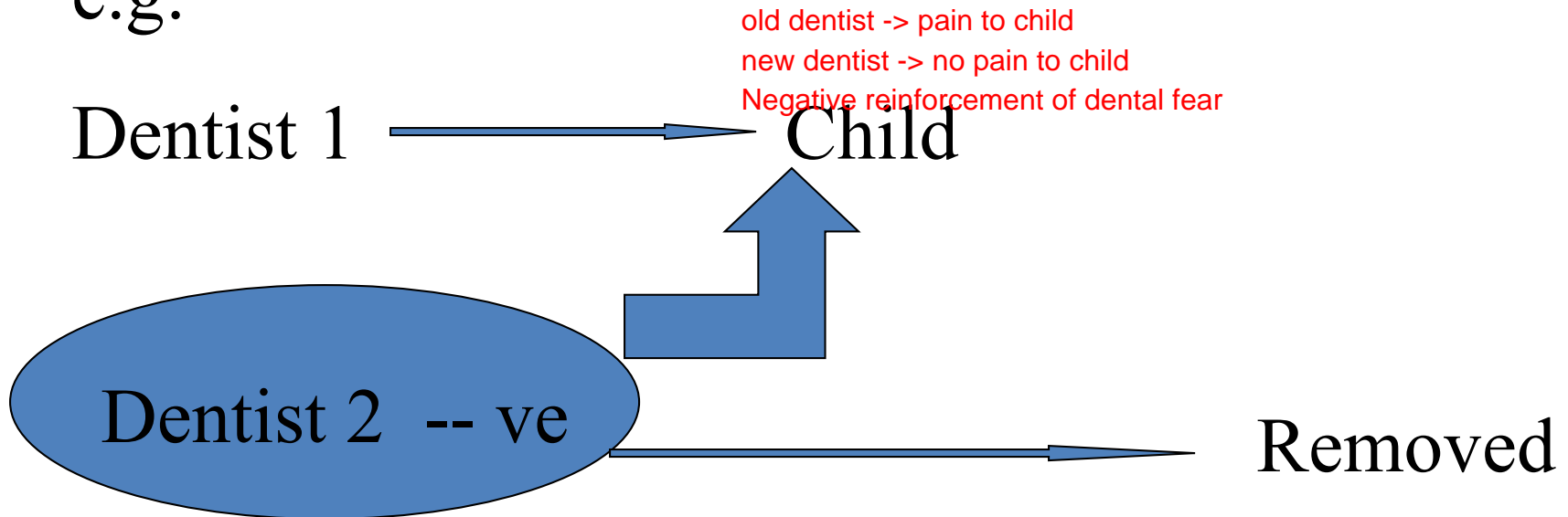
Positive reinforcement

- **Direct – Reward and Social approval**
- **Vicarious – Observing someone receiving reward.**
- **Self administered – Self – praise**

Negative Reinforcement

Removal of the negative stimulus after the desired response is achieved.

e.g:



Omission

Removal of pleasant stimulus

e.g.

Removal of a favorite toy from a child as a consequence of a bad temper to bring about a improvement in behavior.

Punishment

Unpleasant stimulus is present

Problems

1. Timid and oversensitive child
2. Behavioral inflexibility
3. Avoid the situation
4. Learning punishment methods

Clinical applications of operant conditioning

1. Positive and Negative reinforcement is used in Dental office.

2. Punishment

- Mild form is Voice control
- withdrawal of privileges or parental disapproval.

Not as effective as reinforcement

Clinical applications of operant conditioning

Positive Reinforcement

- Behaviour can be increased by using reinforcers such as friendly smile, or praise for a desirable activity
- The more consistent the reinforcer, the more likely a desired behaviour is reached
- Example- parents may use food and drink, such as sweets for a crying child