

Dental attendance of children suffering from general disease

Specialist in orthodontics and pedodontics



SEMMELWEIS EGYETEM

Fogorvostudományi Kar

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Gyermekfogászati és Fogszabályozási Klinika

Dental attendance of children

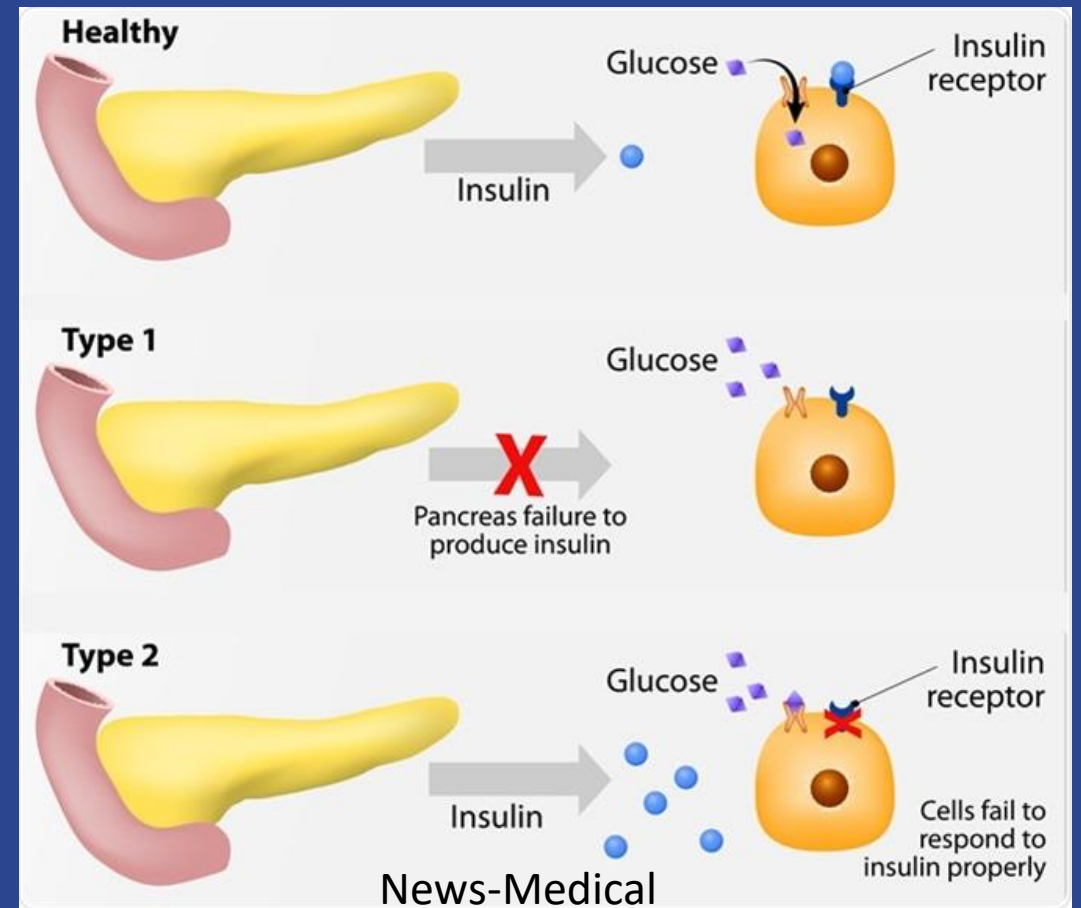
- Diseases of teeth and oral mucosa in (otherwise) healthy children
- (Otherwise) healthy children, met traumatic injuries
- Children suffering from infectious diseases
- Syndromes and other congenital or genetic disorders in children
- Children suffering from mental illnesses
- **Children suffering from general systematic diseases**

Dental attendance of children suffering from general systematic disease

- Diabetes Mellitus
- Kidney
- Cardiovascular
- Haematological
- Respiratory, asthma
- Allergia
- Neurological

Diabetes Mellitus I.

- IDD (I. Typ)
 - 10%
 - Manifestation under 30 („juvenile DB”)
 - Body: normal-asteniác
 - Digestion: labile
 - ID



Diabetes Mellitus II.

- NIDD (II. Typ)
 - 90%
 - Manifestation over 40 („adult DM”)
 - Body: adiposus
 - Digestion: relativ stabil
 - NID

Diabetes Mellitus

- Oral manifestation:
 - Saliva glucose level increase
 - Caries predisposition
 - Xerostomia
 - Burned feeling of mucosa
 - Oral ulceration
 - Paro disease
 - Paro abscess
 - Candidiasis, infection

Diabetes Mellitus

Potential problems at the dental praxis

- Not treated DB: upset of metabolism (pl. Stress, workout, starving, insulin) => hypoglycaemia, ataxia, tachycardia, hipertensio, fear of death, strange speech, acetonic breath (looks drunk)
- Infection predisposition (Str. A Haemol., Staph)
- Woundhealing difficulties
- Cardiovascular (hypertonia, cardiac insufficiency, angina p., infarctus)
- Optic (retinopathia, blindness)
- Nephrological (renal failure)
- Neurological (periferial neuropathy)

Diabetes Mellitus

Dental treatment

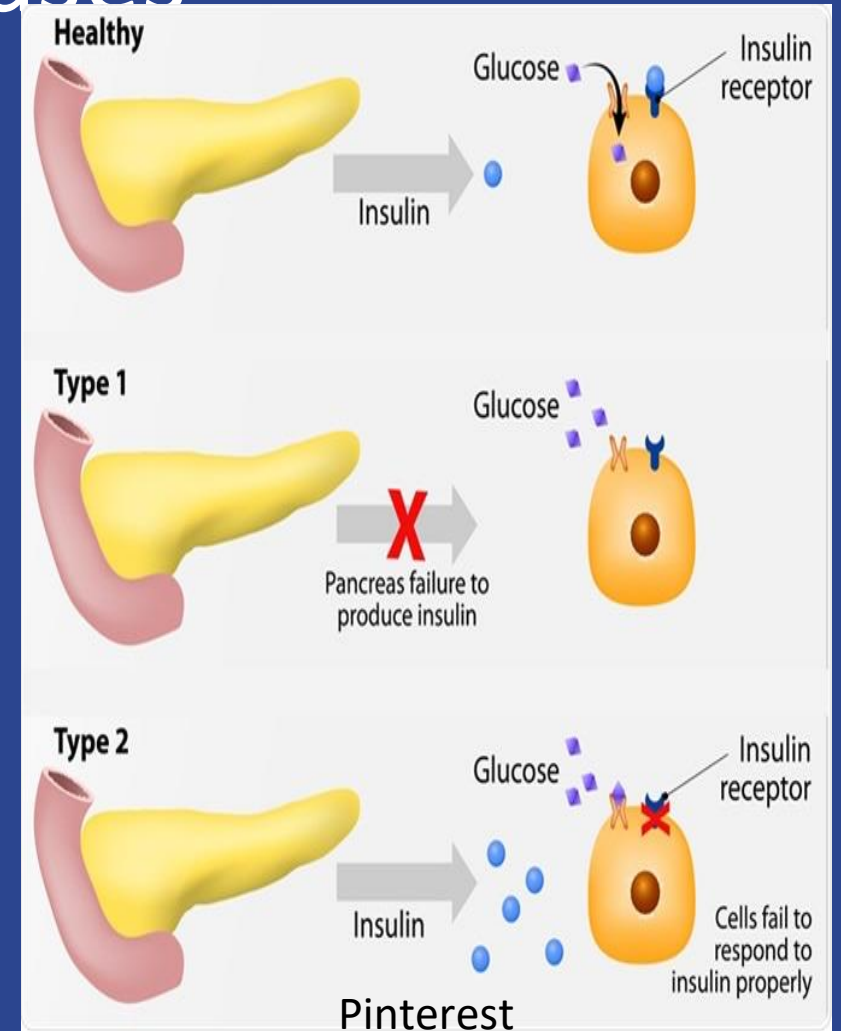
- Consultation with general doctor/ specialist!!!
- Aim: PREVENTION
- Need of steroid?
- Need of AB profilaxis?
- Don't use anesthetic or retraction thread with tonogen
- Don't use medicaments containing sugar, sweetener
- Drug interactions: NSAID, acetyl, tetracyclin, asparagin
- Avoidens of hypoglicaemy: eat before (little), take insulin before if needed, morning treatment

Kidney diseases

- Nephrosis syndrome (Proteinuria)
- Developmental and eruption disorder
- Drug metabolism change depending on renal function:
 - NSAID
 - Benzodiazepines
 - Steroids
- Aim: PREVENTION

Cardiovascular diseases

- Often part of a syndrome
- Increased bleeding predisposition
- Increased infectious predisposition
- Often hospitalised
- Decidui teeth: caries
- Permanent teeth: hypoplasia



Congenital Cardiac diseases

- 15% sy (Down 70%)
- Predisposition: rubeola, diabetes, alcoholism, drugs, smoking)
- Cianotic:
 - Early surgery
 - Venuosus blood
(from the left to the right)
 - Fallott-tetralogy
 - Pulmonal atresia
 - Vascular transposition
- Acianotic:
 - Obstructive: aortastenosis, pulmonal stenosis, coarctatio aortae
 - Shunt: atrial, ventral, atrioventricular septumdefect, Pers. Ductus Botelli

Cardiac diseases after birth

- Rheumatic fever
- Myocardium, pericardium inflammations
- Arrhythmies
 - Additional impulse conduction ways => AV nodus=> early stimulus=> tachycardia, rhytm disorders
- Other

Cardiavascular diseases

Dental treatment

- Consultation
- Aim: PREVENTION (diet, oral hygiene, F⁻, FS), controll
- Hole mouth sanation before heart sugery
- Need of AB profilaxis? Inform parents about IE
- Every invasive intervention should be done under profilactic defence in high risk patients, otherwise AB not indicated
- Drug type, form, dose, repeat
- Befor invasive intervention CHX

IE High risk patients

- After correction of cardiovascular defect, if there was an implantation (valve replacement, cardiac catheter)
- IE in anamnesis
- Mitral prolapsus with regurgitation
- Severe congenital developmental cardiac disorder (cyanotic or regurgitational)

AB-profilaxis: 20mg/bwkg Penicillin

50 mg/bwkg clindamicin

15 mg/bwkg macrolid

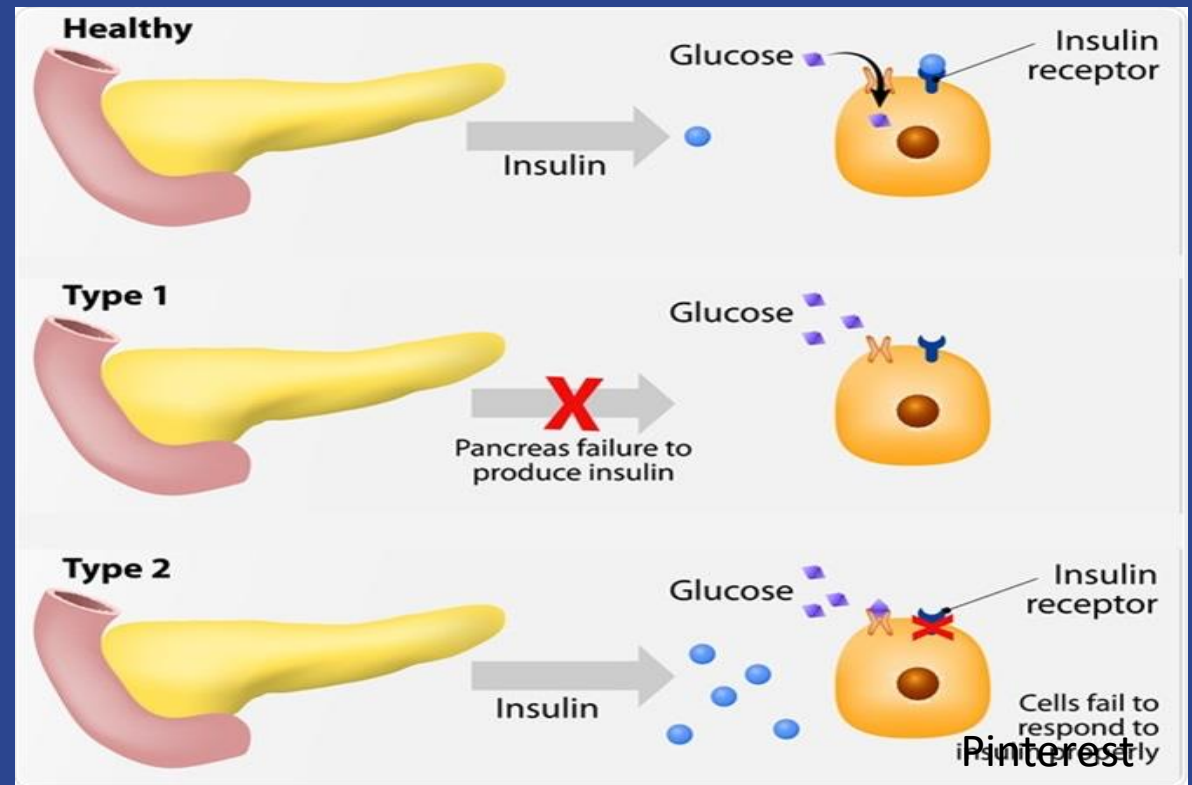
IE High risk patients

Dental treatment

- cofferdam, matrica, wedge, sulcusexpander
- Paro sonda, surgery, depuration
- Gyk
- Extr, repl, impl, sep.
- Intraligamentar injection (Tonogen not contraindicated)
- Not dangerous:
 - Pulpotomy (?)
 - Abscess incision
 - Removal of suture

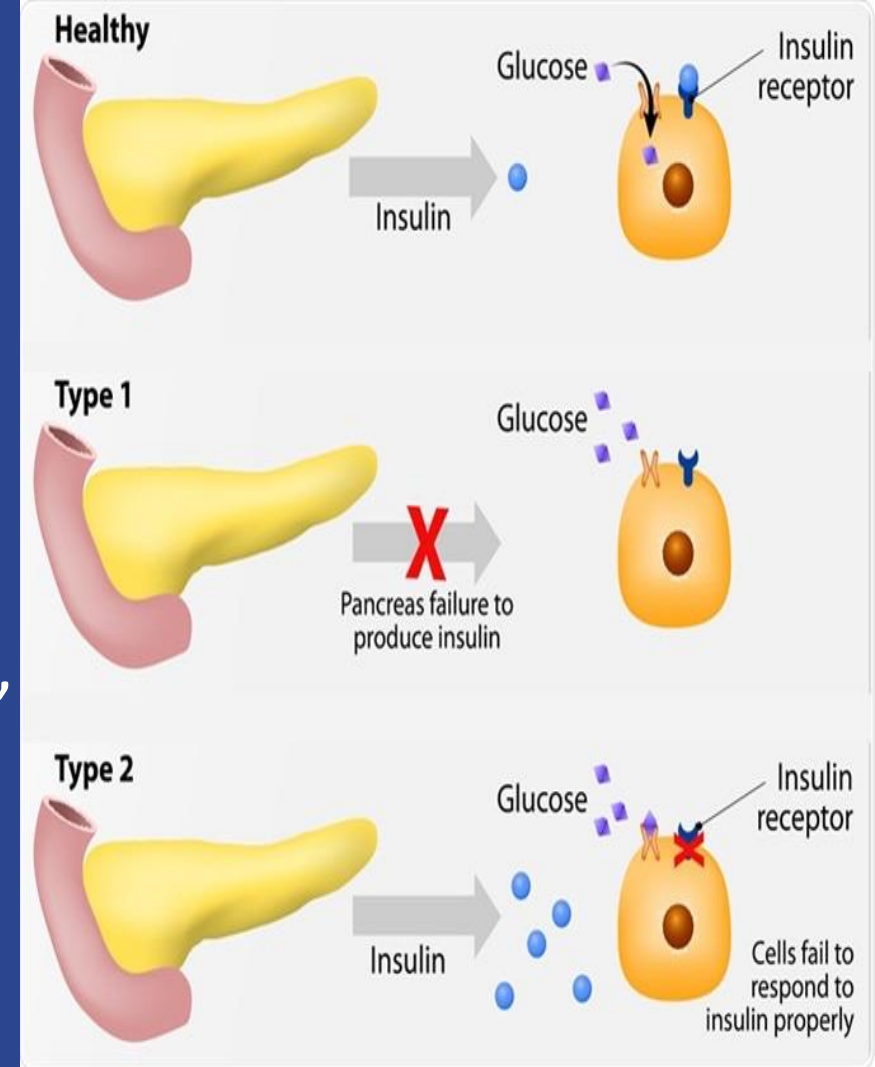
Haematological diseases

- Coagulation disorders
- Quantitative disorders of red blood cells
- Quantitative disorders of red blood cells



Coagulation disorders

- Genetic
 - Haemophilia A
 - Haemophilia B
 - Von Willebrand sy (VIII. factor missing, thrombocyta-adhesion decrease)
- Medicine side effect
- Hepatic diseases
- Infections
- Other severe diseases (pl. leukaemia)



reported commonly

Thrombocyta count

- Norm: $300 \times 10^9/l$, minimally acceptable $50 \times 10^9/l$
- Thrompocytopaenia:
 - Producing by bone marrow decreases (drug, aplast anaemia)
 - Idiopathic
 - Virus or rubeola vaccination IgG (4-6 weeks spontan healing, skin- or mucosa petechia purpura)
- 75 g/l wound bleeding
- 25 g/l spontan bleeding
- 15 g/l skin petechia
- 5 g/l oral petechia

Protrombin rate

- For Protrombin-Trombin transformation
- Measurement: Quick - time (tromboplastin time)

- Norm: 100% (80-120%)

- Minimally acceptable: 40% (INR=2,5)

INR (International Normal Relation)

- Healthy Quick time (100%) proportional to the measured Quick

- Quick decreases, INR increases

- Pl. If PR= 50 %, INR=2

- Maximally acceptable: 2,5 (Quick: 40 %)

Coagulation disorders

Dental treatment

- Consultation
- Aim: PREVENTion (diet, oral hygiene, F-, FS), controll
- Hole mouth sanation
- Stand clear of invasive intervention, if there is higy risk of bleeding: laboratory blood test factors of coagulation and thrombocyta rate (TCT)
- Drug type, form, dose, repeat

Coagulation disorders

Dental treatment

Platelet count or function decreases => no coagulum

=> bleeding after trauma (haemophilia it lasts for 4h)

=> prolonged bleeding episodes, spontan gum bleeding

=> predisposition to infections

No Szokoloczy! (maybe after factor supplementation)

No extraction, rather endodontia (Except decidui teeth)

In case of postoperative bleeding

- Preoperatively: provide with written and verbal information, what to do if bleeding doesn't stop in 1-2 hours
- Diet, oral health, No NSAID No!
- Local pressure
- Suture
- Spongostan with trombin
- Oxycellulose, Collagen
- Drug: Tranexamsav (Exacyl tabl., rinsing– antifibrinolytic)
- Transfusion

Changes in the amount of red and white blood cells

Red blood cells

- Anaemia
- Polycythaemia

White blood cells

- Leukopaenia
- Leukocytosis
- Leukaemia (80% ALL, CLL, 20% AML, 1% CML)
- Lymphoma (HL,NHL)

Anaemia

- Erythropoiesis dysfunction: - lack of Fe²⁺, B12-vit, C-vit., folic acid
- bone marrow functional disorder (aplast., AI, malign, burn)
- Increased death of red blood cells: - extrinsic: transfusio, drug
- intrinsic: ensimopathia, AI, thalassemia)
- Blood loss: acut/chronic bleeding
- Symptoms: Glossitis (papilla atrophica), tongue burn, pain, stomatitis, cheilitis angularis
- Forms: normocytosis, microcytosis, macrocytosis
normochrom, hypochrom, hyperchrom

Leukaemia

- Chronic: normális leukocyták száma nő
- Acut: blastsells pile up
- Symptoms: pale-faced, anorexia, hepatosplenomegalia, lymphadenopatia, infections, anaemia
- Oral symptoms: bleeding, petechia, ANUG, sore throat swallowed glands, xerostomia, foetor => „leukaemic mouth”
- Parodontal defect, bone deformation, tooth moves
- Aplasia, microdontia, redixless teeth

Leukaemia

Dental treatment

- Only in remission!
- Consultation with general doctor/ specialist!!!
- Aim: PREVENTION diet, oral hygiene, F-, FS), controll
- Fungal, viral, AB profilaxis (Nystatin, Acyclovir, CHX)
- Salive supplement: Biotene
- Hole mouth sanation
- Get clear of invasive intervention, no Szokoloczy
- Medicine type, form, dose, repaet

Changes in the amount of red and white blood cells, Dental treatment

- High cariesrisk
- Consultation
- Aim: PREVENTION (diet, oral hygiene, F-, FS), controll
- Hole mouth sanation
- Stand clear of invasive intervention without hospital background, if there is high risk of complication: laboratory blood test, profilaxis
- Drug type, form, dose, repeat

Changes in the amount of red and white blood cells, Dentistry connected complication

- Immundeficiency
- Infektion predisposition, mucositis
- Ulceration
- Slow woundhealing
- Coagulation disorders
- Pain, bleeding => leave oral hygiene routine
- Drugs: nausea, neuropathic symptoms

Respiratory diseases

- Asthma
 - Stress provoking factors
 - Preoperative 1-2 puff inhalator (decreases saline, milksugar!)
 - Ventalyn corticosteroid-powder
- Allergia, tonsillitis, nose polip, septumdefect
- Cystic Fibrosis (AR)
 - Exocrin glands multisystematic disease ,hepatic cirrhosis, haemophilia
 - Frequent eating => cariesrisk
 - Not allowed to treat in general anesthesia, AB profilaxis neded (tetracyclin)

Epilepsy

- Drug hydantoin => gingivahyperplasia, xerostomia
=> drowsiness, coordination decreases
- Prevention of epileptic seizure: bensodiasepin
- In case of epileptic seizure: Seduxen (im. 10mg , Rectal)
- Preparation of assistency, trigger minimalisation
- Don't provide them with removable labil appliances
- Total luxation/ avulsion no replantation
- Fix nonceramic prosthetic devices

Thank you for your kind attention!

