



Nytt om forskning
Trond Jenssen
OUS Rikshospitalet og
UIT Norges Arktiske Universitet



diabetesforbundet

Før introduksjon av insulin i 1922
var type 1 diabetes en dødelig sykdom

15. desember 1922 15. februar 1923

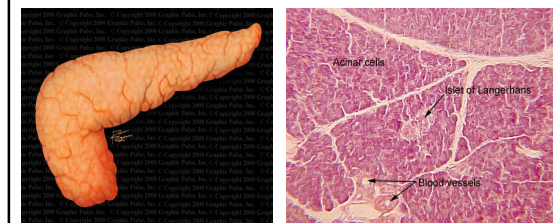




diabetesforbundet

ge perspektiv...

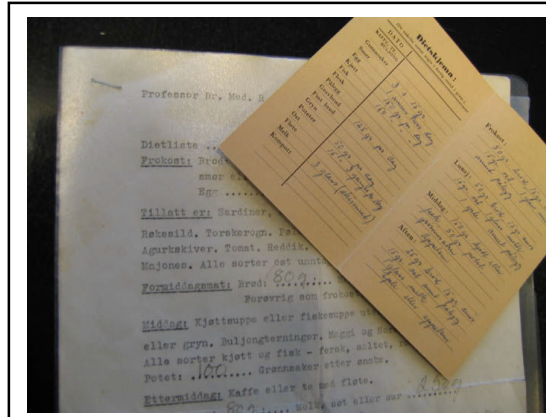
Bukspyttkjertelen



Acinar cells
Islet of Langerhans
Blood vessels

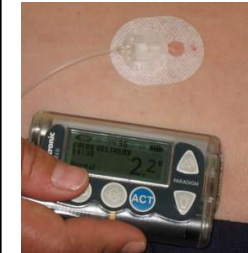


Gammel insulinpumpe



Forskjellige insulinpumper

Medtronic pumpe



Roche pumpe



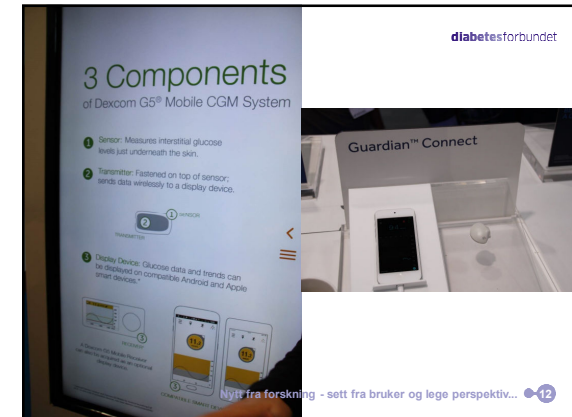
diabetesforbundet

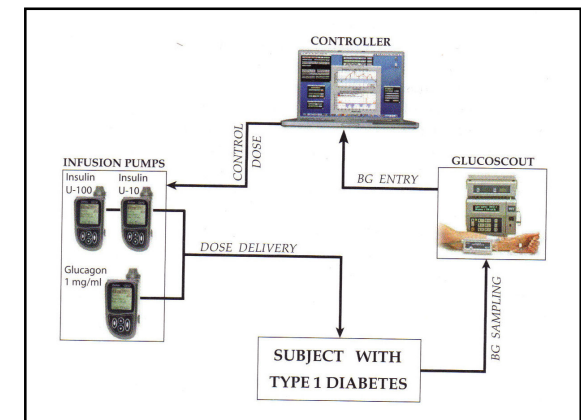
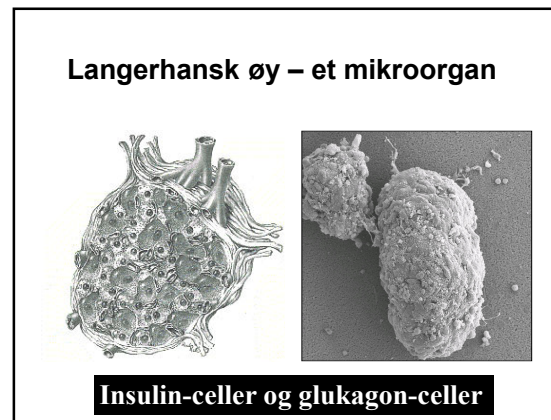
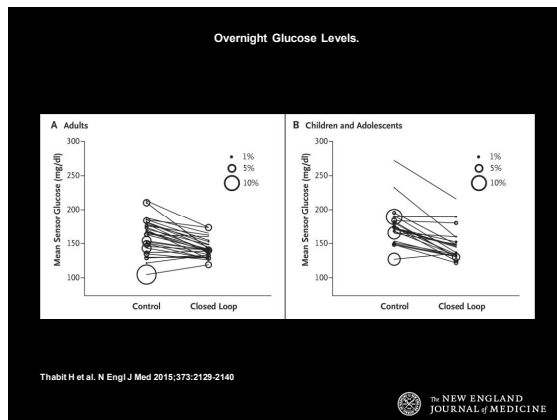
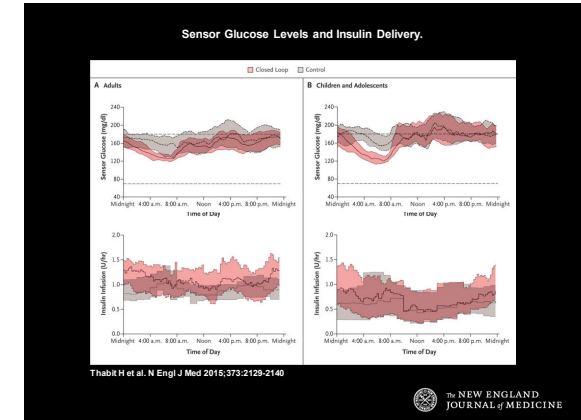
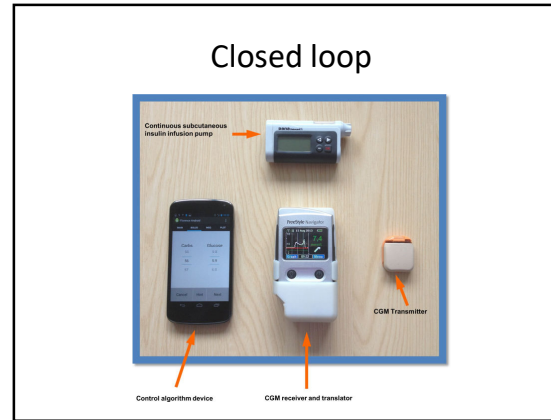


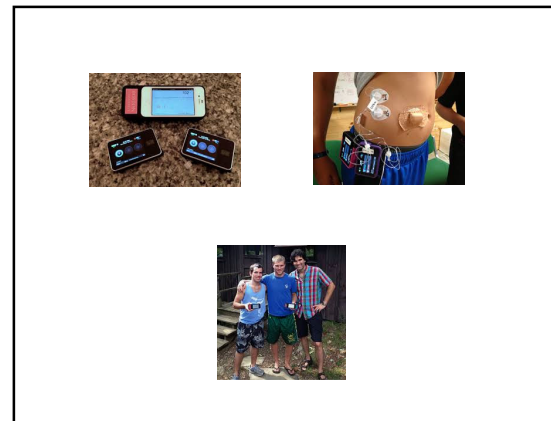
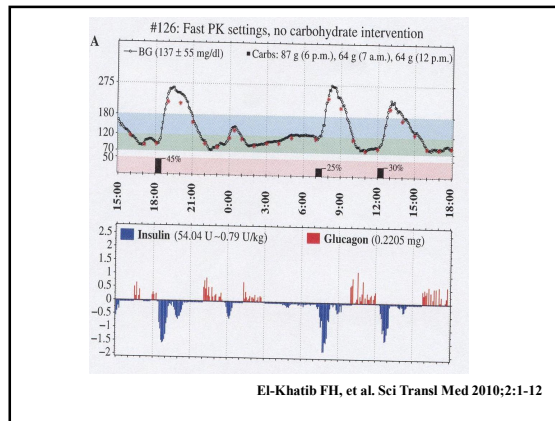
diabetesforbundet



diabetesforbundet







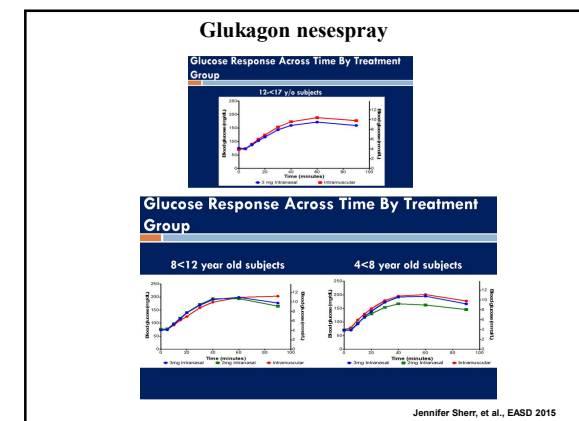
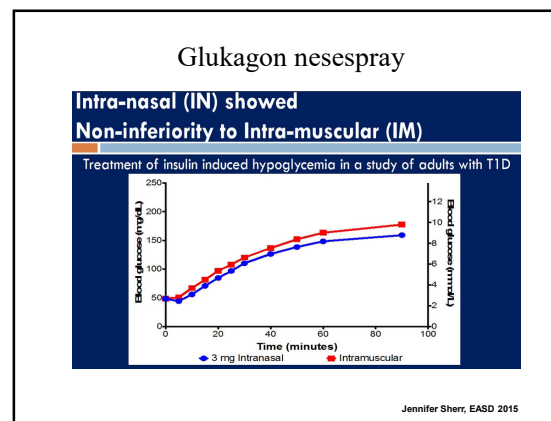
Glukagon nespray

Methods

Intramuscular

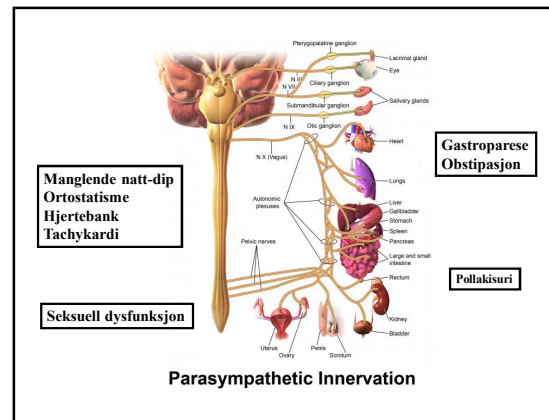
Intranasal

Jennifer Sherr, EASD 2015



Senkomplikasjoner

- De små arteriene (Mikrovaskulære)
 - Nyrer (nefropati)
 - Øyne (retinopati)
 - Nerver (neuropati)
- De store arteriene (Makrovaskulære)
 - Hjerte og hjerne
- Det automatiske nervesystemet (blodtrykk, fordøyelse, urinveier)

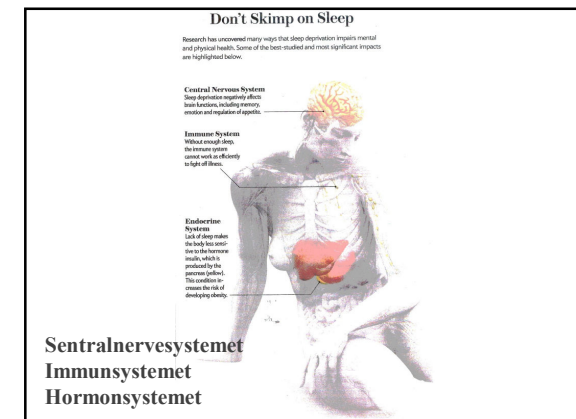


Levevaner og diabetes

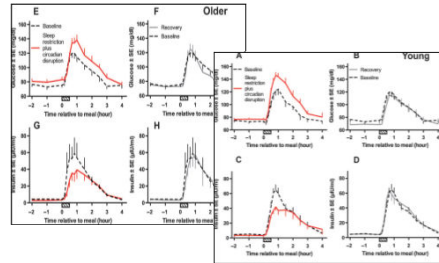
- Riktig kost
- Riktig mosjon

Levevaner og diabetes

- Riktig kost
- Riktig mosjon
- Og.....?



Eksperimentell "Jet-lag"



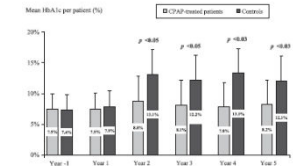
Buxton OM, et al. ScienceTranslationalMedicine. 2012;Vol4, Issue 129

Søvnapne

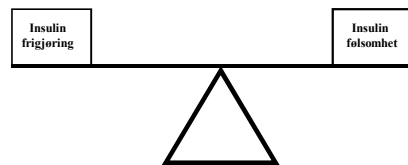
- Overvekt (diabetes type 2)¹
- Autonom nevropati (diabetes type 1)^{2,3,4}
 - Forekommer hos 25-50% av pas med T1DM og autonom nevropati^{2,3}
 - Kan være assosiert med pustestopp⁴

¹Guest J, et al. Diabetes Care 2014;37:1263-71
²Rees PJ, et al. J R Soc Med 1981;74:192
³Ficker JH, et al. Eur Respir J 1998;11:14
⁴Page MM, Watkins PJ. Lancet 1978;1:14

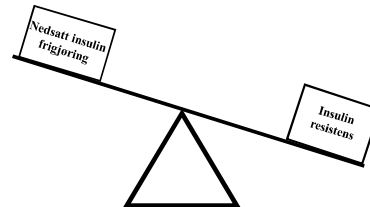
Clinical Outcomes and Cost-effectiveness of Continuous Positive Airway Pressure to Manage Obstructive Sleep Apnea in Patients With Type 2 Diabetes in the U.K.



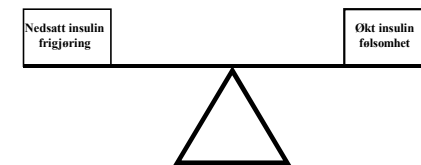
Hva skjer når man utvikler diabetes type 2?



Hva skjer når man utvikler diabetes type 2?



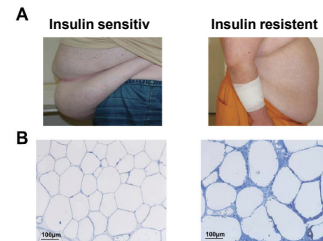
Hva skjer når man utvikler diabetes type 2?



Nyheter

- De fleste som får diabetes type 2 har gener som rammer insulincellene
- Mange som får diabetes type 2 har gener som rammer fettcellene og deres plassering

Insulinresistente og insulinfølsomme overvektige

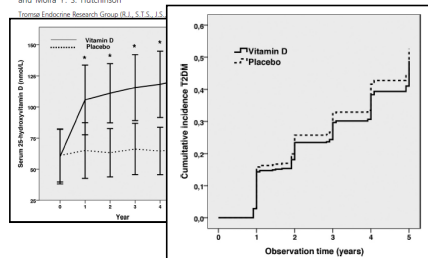


Klötting N, et al. Am J Physiol Endocrinol Metab 2010;299:E506-15



Vitamin D 20 000 IU per Week for Five Years Does Not Prevent Progression From Prediabetes to Diabetes

Rolf Jorde, Stina T. Sollid, Johan Svartberg, Henrik Schirmer, Ragnar M. Joakimsen, Inger Njøstad, Ole M. Fuskevåg, Yngve Fjersgaut, and Morten V. S. Hutchinson
Trondheim Endocrine Research Group (B.I., S.T.S., J.S.)



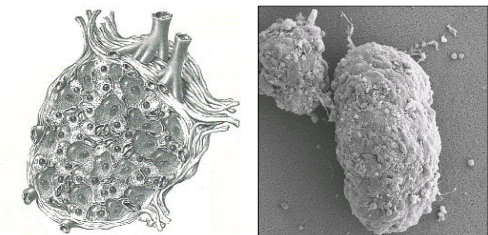
JCEM 2016;101:1647-55

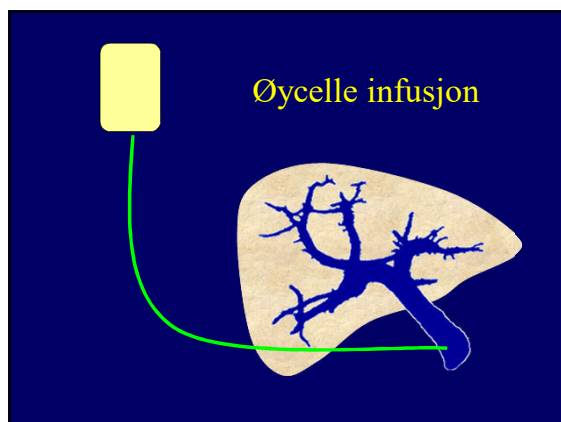
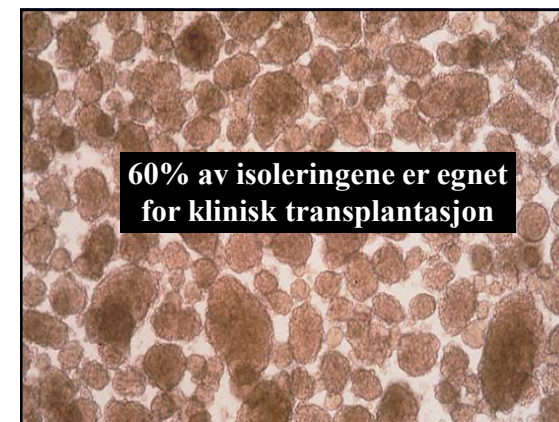
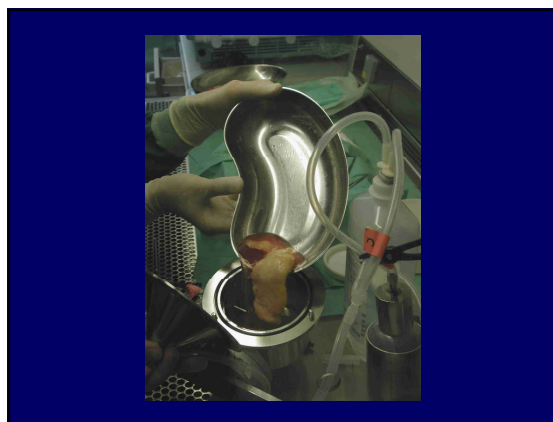
Vitamin D on Trial

NAME	PLACE	PARTICIPANTS	DOSE	MAIN OUTCOMES	CURRENT STATE	RESULTS EXPECTED
VITAL	U.S.	20,000 men: 50+ women: 55+	2000 IU D ₃ daily	Cancer, Cardiovascular disease	Recruitment to finish end of 2012	2017
FIND	Finland	18,000 men: 60+ women: 65+	1800 IU D ₃ daily or 3200 IU D ₃ daily	Cancer, Cardiovascular disease, Diabetes	Recruitment started in spring, supplementation to start in autumn	2020
VIDA	New Zealand	5100, 50+	100,000 IU D ₃ a month (200,000 IU in June)	Cardiovascular disease, Respiratory disease, Fractures	Recruitment to finish this year	2017
DOHealth	8 European cities	2150, 70+	2000 IU D ₃ daily	Infections, Fractures, Blood pressure, Cognitive function, Lower extremity function	Recruiting	2017
VIDAL	U.K.	20,000, 65-84	60,000 IU monthly	Longevity and others	Planned 2-year feasibility study on 1600 patients is recruiting	2020 (if main study gets go-ahead)

Kupferschmidt K. Science 2012;337:1476-8

Langerhans øy – et mikroorgan





diabetesforbundet

Øycelleisoleringslaboratoriet ved OUS

Seksjon for Celleterapi, Radiumhospitalet

Nytt fra forskning - sett fra bruker og lege perspektiv... 47

diabetesforbundet

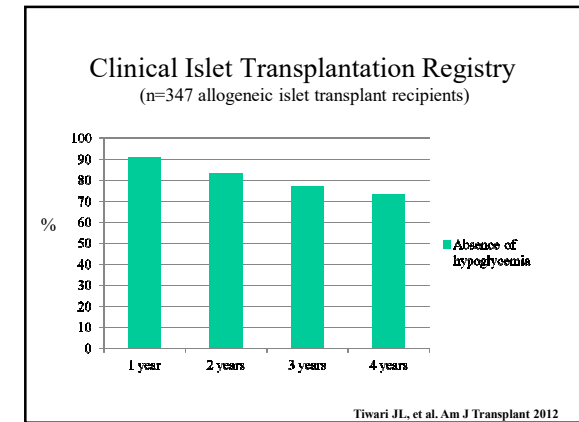
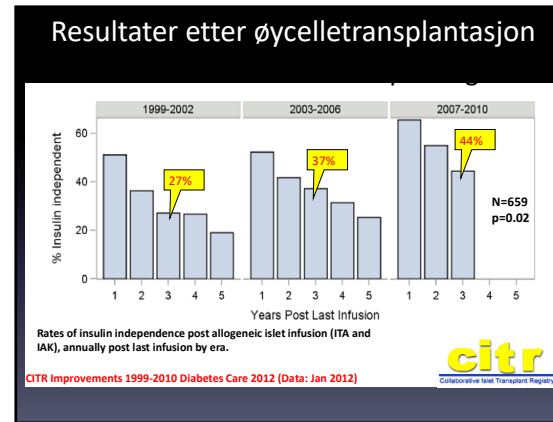
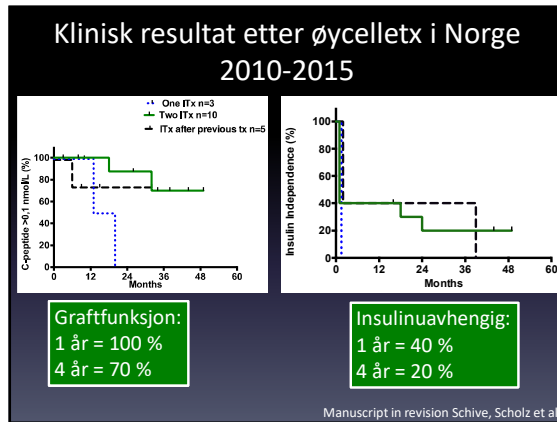
Øycelleprogrammet

diabetesforbundet Oslo Diabetes Research Centre

NORDIC ISLETS NORDIC NETWORK FOR ISLET TRANSPLANTATION

HELSE SØR-ØST

Nytt fra forskning - sett fra bruker og lege perspektiv... 48



Alternative site for the islets is in phase 1 study

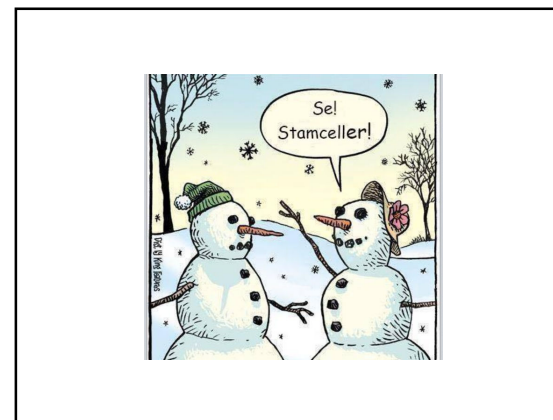
No More Insulin Shots, Thanks to a New Type of Islet-Cell Transplant

The biodegradable scaffold is made using a patient's own plasma together with thrombin, a clinical-grade enzyme. When combined, they create a "sticky gel" that holds the islets in place. The area of the omentum is then folded over and stitched, creating a protective "pouch" around the scaffold mixture.

Omentum

LATERAL VIEW OF OMENTUM

Nytt fra forskning - sett fra bruker og lege perspektiv...



Adipose-derived adult stem cells (ASCs)

En rekke udifferentierte stamceller som kan lage vevstyper fra en gruppe halvspesialiserte stamceller (mesenchymale celler)

Bandlingsmuligheter med AS

- ✓ Høstes uten traume
- ✓ Kan formere seg i GMP ex vivo lab
- ✓ Synes trygg og effektiv å injisere hos mennesker

Nytt fra forskning - sett fra bruker og lege perspektiv...

