IDW Symposium
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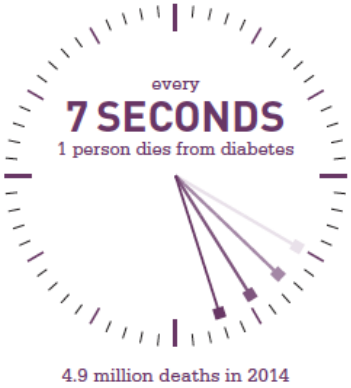
Schweizerische Gesellschaft für
Endokrinologie und Diabetologie - SGED

Diabetes Epidemiologie

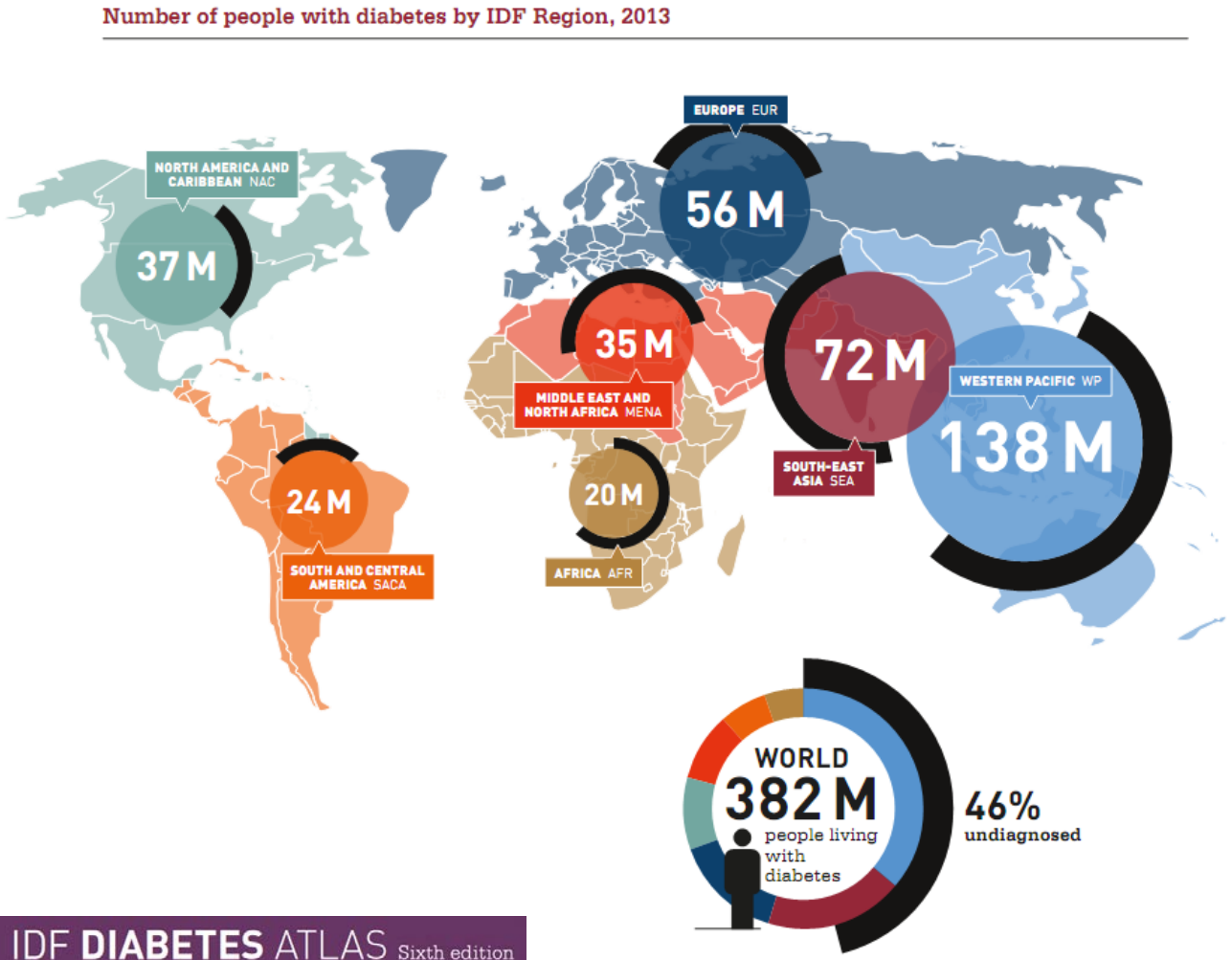
1/12
people with
DIABETES



1 healthcare in 9
IS SPENT ON DIABETES
In 2014 diabetes expenditure
reached US$612 billion

International Diabetes Federation
IDF DIABETES ATLAS Sixth edition

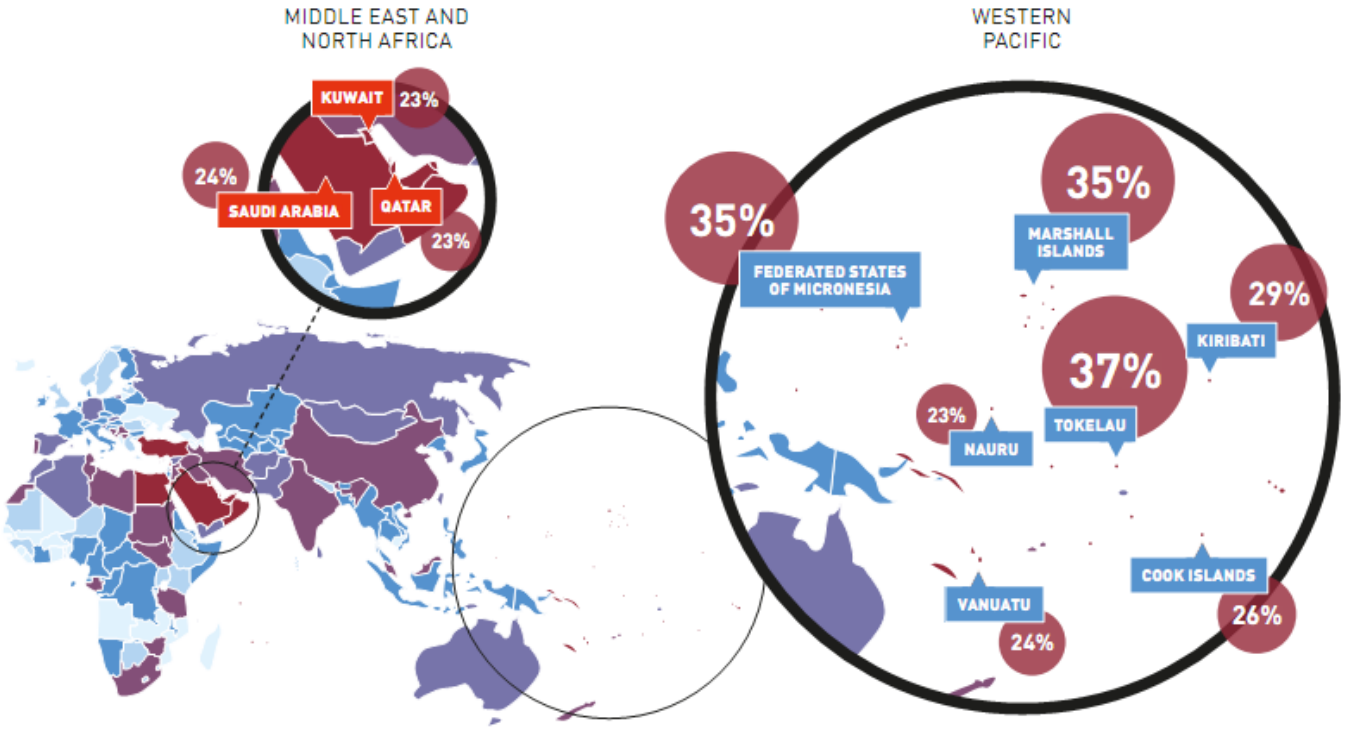
Diabetes Epidemiologie



Diabetes Epidemiologie

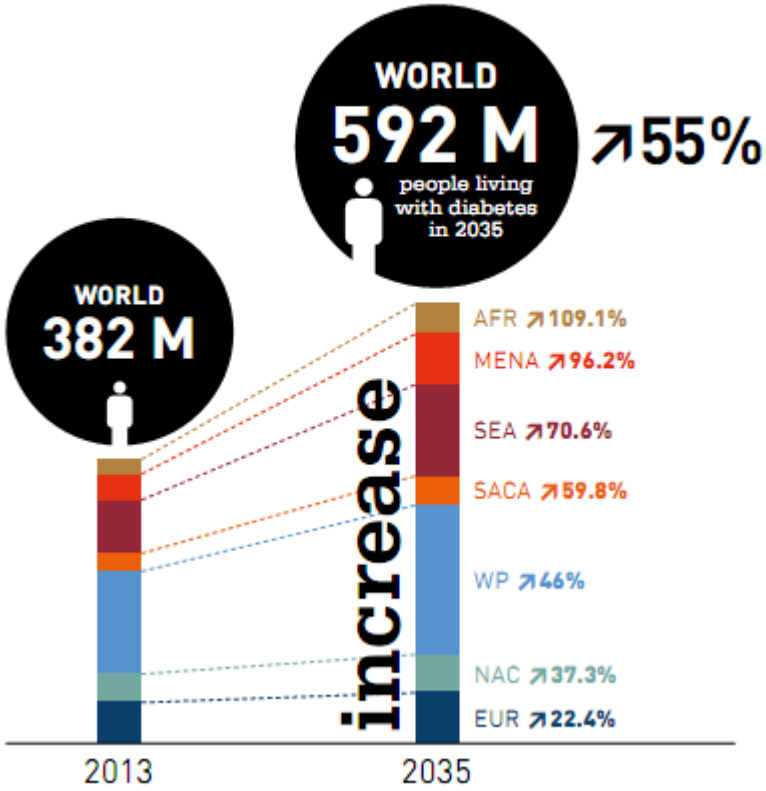
Top 10 countries/territories for prevalence* (%) of diabetes (20-79 years), 2013

* comparative prevalence



International Diabetes Federation IDF **DIABETES** ATLAS Sixth edition

Diabetes Epidemiologie



382 Millionen Personen sind Dlabetiker

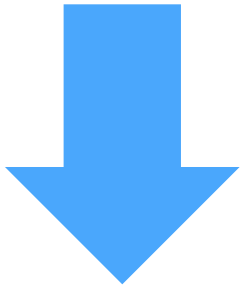
Bis 2035 werden es 592 Millionen sein

International Diabetes Federation IDF DIABETES ATLAS Sixth edition

Herausforderungen für den Hausarzt bei Behandlung von Typ 2 DM

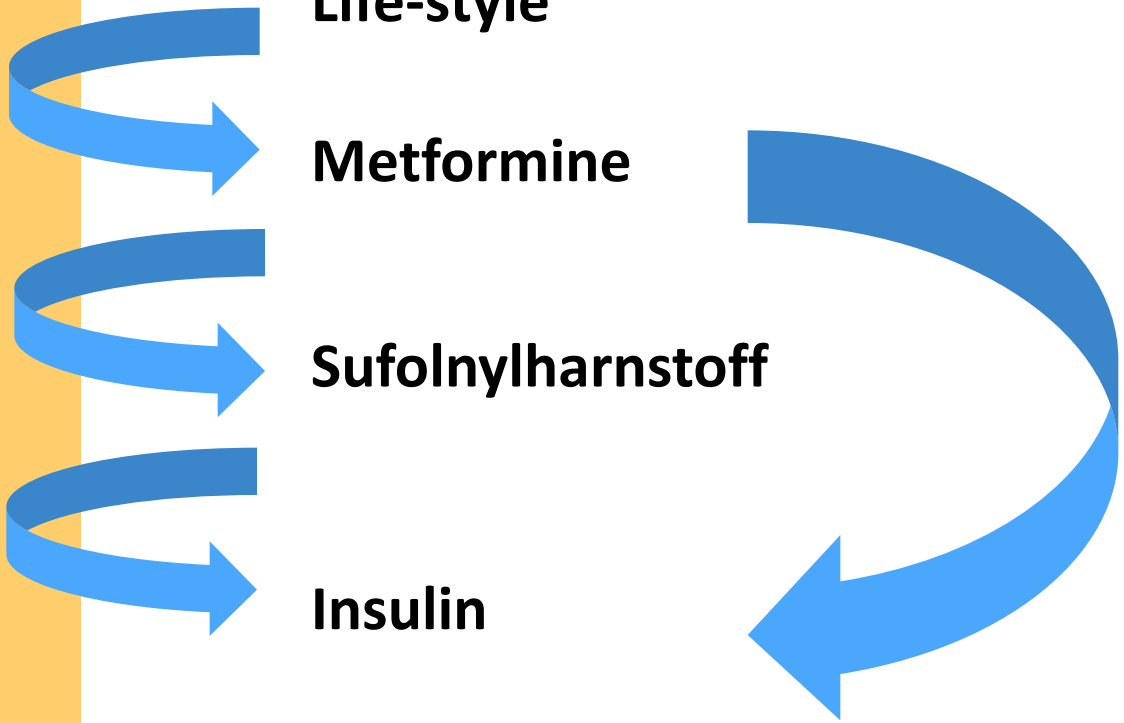
- viele Patiente
- viele Komplikationen
- viele (neue!) Medikamente
- viel Geld (vor allem für neue Medikamente)
- intensives Marketing, aber wenig gute Endpunkte

European Society for the Study of Diabetes (EASD) / American Diabetes Association (ADA) Position Statement 2012



Management of hyperglycaemia in type 2 diabetes, 2015: a patient-centred approach. Update to a Position Statement of the American Diabetes Association and the European Association for the Study of Diabetes

« klassicher Weg »



Aussenspieler

Glinide (Starlix®, Novonorm®)

Glitazone (Actos®), ~~Avandia~~®)

2015 Medikamente

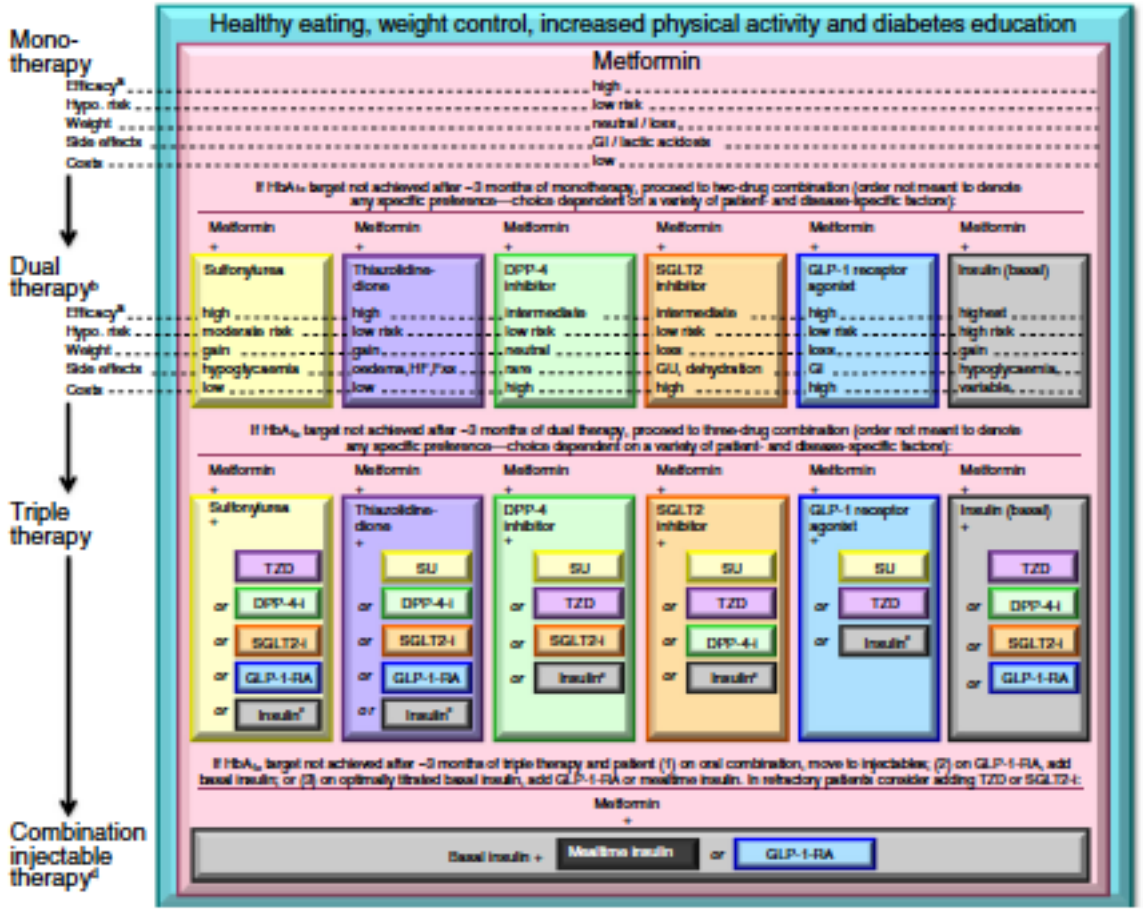
Properties of available glucose-lowering agents in the USA and Europe that may guide individualised treatment choices in patients with type 2 diabetes

Class	Compound(s)	Cellular mechanism(s)	Primary physiological action(s)	Advantages	Disadvantages	Cost[a]
Biguanides	• Metformin	Activates AMP-kinase (? other)	• ↓ Hepatic glucose production	• Extensive experience • No hypoglycaemia • ↓ CVD events (UKPDS)	• Gastrointestinal side effects (diarrhoea, abdominal cramping) • Lactic acidosis risk (rare) • Vitamin B_{12} deficiency • Multiple contraindications: CKD, acidosis, hypoxia, dehydration, etc.	Low
Sulfonylureas	2nd generation • Glibenclamide/ glyburide • Glipizide • Gliclazide[b] • Glimepiride	Closes K_{ATP} channels on beta cell plasma membranes	• ↑ Insulin secretion	• Extensive experience • ↓ Microvascular risk (UKPDS)	• Hypoglycaemia • ↑ Weight • ? Blunts myocardial ischaemic preconditioning • Low durability	Low
Meglitinides (glinides)	• Repaglinide • Nateglinide	Closes K_{ATP} channels on beta cell plasma membranes	• ↑ Insulin secretion	• ↓ Postprandial glucose excursions • Dosing flexibility	• Hypoglycaemia • ↑ Weight • ? Blunts myocardial ischaemic preconditioning • Frequent dosing schedule	Moderate
TZDs	• Pioglitazone[c] • Rosiglitazone[d]	Activates the nuclear transcription factor PPAR-γ	• ↑ Insulin sensitivity	• No hypoglycaemia • Durability • ↑ HDL-C • ↓ Triacylglycerols (pioglitazone) • ? ↓ CVD events (PROactive,	• ↑ Weight • Oedema/heart failure • Bone fractures • ↑ LDL-C (rosiglitazone) • ? ↑ MI (meta-analyses, rosiglitazone) • Training requirements	Low
Insulins	• Rapid-acting analogues – Lispro – Aspart – Glulisine • Short-acting – Human Regular • Intermediate-acting – Human NPH • Basal insulin analogues – Glargine – Detemir – Degludec[b] • Pre-mixed	Activates insulin receptors	• ↑ Glucose disposal • ↓ Hepatic glucose production • Other	• Nearly universal response • Theoretically unlimited efficacy • ↓ Microvascular risk (UKPDS)	• Hypoglycaemia • Weight gain • ? Mitogenic effects • Injectable • Training requirements • Patient reluctance	Variable[e]

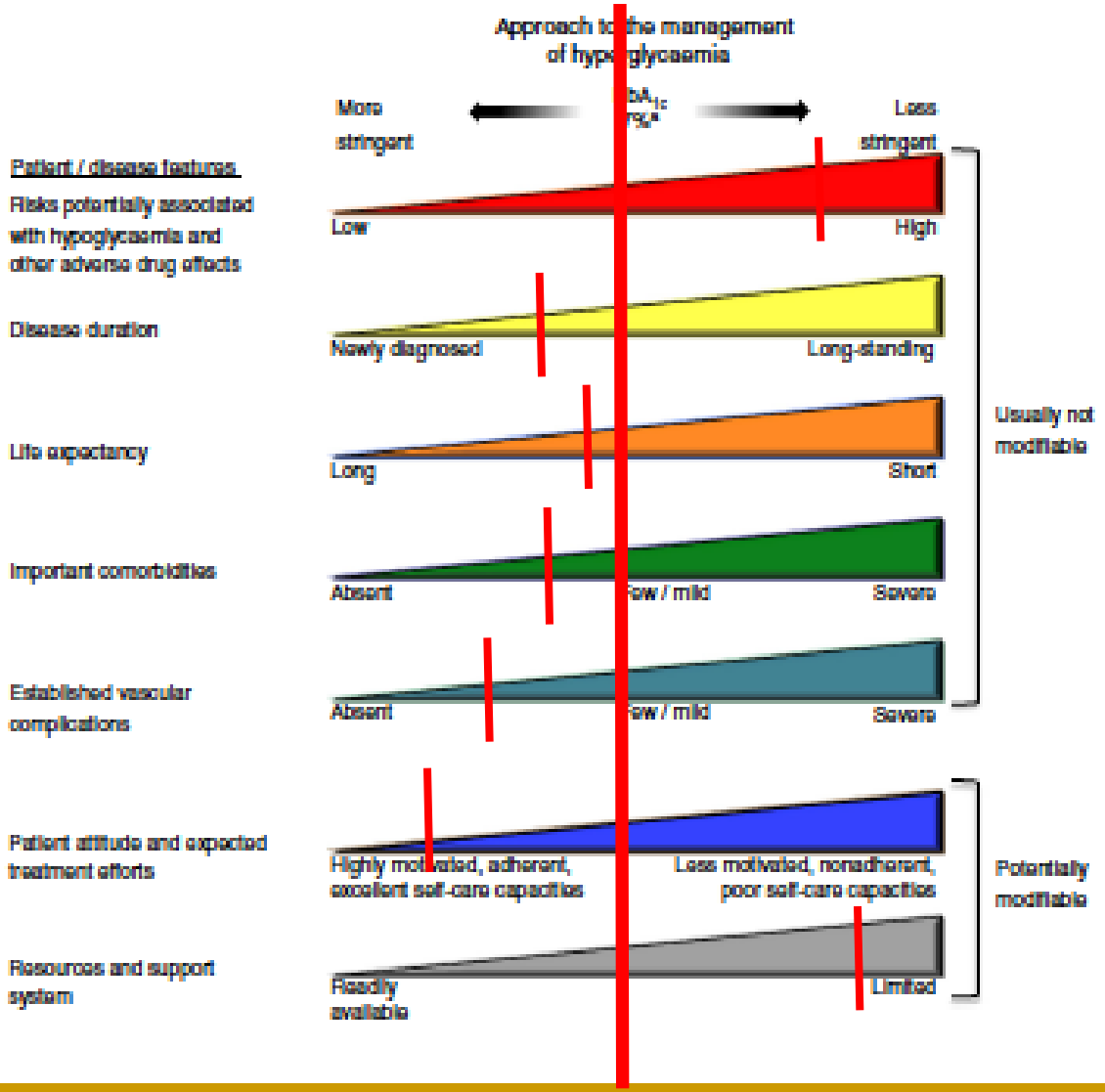
2015 Medikamente

DPP-4 inhibitors	• Sitagliptin • Vildagliptin[b] • Saxagliptin • Linagliptin • Alogliptin	Inhibits DPP-4 activity, increasing postprandial active incretin (GLP-1, GIP) concentrations	• ↑ Insulin secretion (glucose-dependent) • ↓ Glucagon secretion (glucose-dependent)	• No hypoglycaemia • Well tolerated	• Angioedema/urticaria and other immune-mediated dermatological effects • ? Acute pancreatitis • ? ↑ Heart failure hospitalisations • Rhinitis	High
SGLT2 inhibitors	• Canagliflozin • Dapagliflozin[c] • Empagliflozin	Inhibits SGLT2 in the proximal nephron	• Blocks glucose reabsorption by the kidney, increasing glycosuria	• No hypoglycaemia • ↓ Weight • ↓ Blood pressure • Effective at all stages of T2DM	• Genitourinary infections • Polyuria • Volume depletion/hypotension/ dizziness • ↑ LDL-C • ↑ Creatinine (transient)	High
GLP-1 receptor agonists	• Exenatide • Exenatide extended-release • Liraglutide • Albiglutide • Lixisenatide[b] • Dulaglutide	Activates GLP-1 receptors	• ↑ Insulin secretion (glucose-dependent) • ↓ Glucagon secretion (glucose-dependent) • Slows gastric emptying • ↑ Satiety	• No hypoglycaemia • ↓ Weight • ↓ Postprandial glucose excursions • ↓ Some cardiovascular risk factors	• Gastrointestinal side effects (nausea/vomiting/diarrhoea) • ↑ Heart rate • ? Acute pancreatitis • C cell hyperplasia/medullary thyroid tumours in animals • Injectable • Training requirements	High

2015 Behandlungsbaum ADA / EASD



Zeit der individualiserten Medizin



Key Messages 2015

- viele Patiente jetzt und noch mehr in Zukunft
- viele Medikamente
- viel Geld im Spiel
- jeder Patient ist individuell und hat sein eigenes HBA1c Ziel
- noch wenig Erfahrungen mit den neuen Medikamente
- nicht nur HbA1c denken

  aber alle kardio-vaskuläre Risikos agressiv behandeln