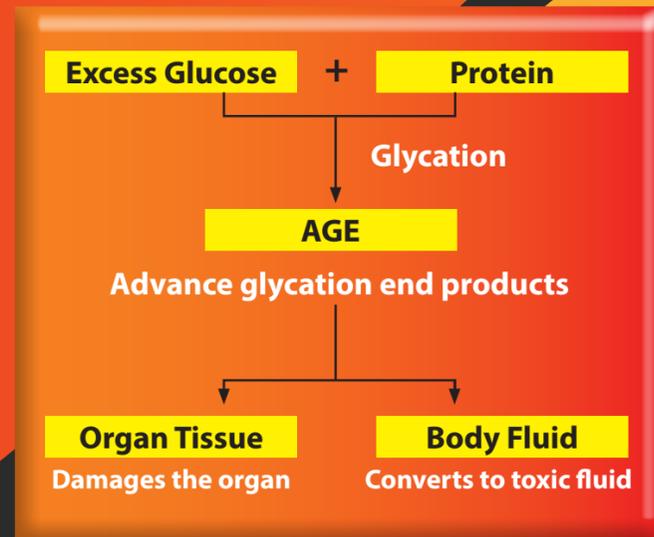
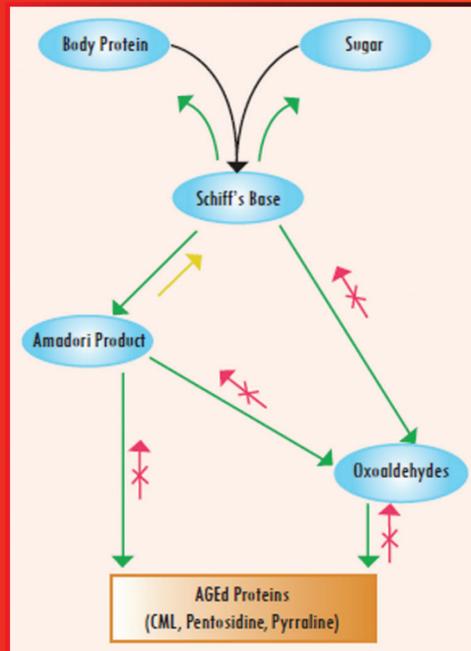


## In Diabetes – Advanced Glycation End Products Major Culprit



Hyperglycaemia has an important role in the pathogenesis of diabetic complications by increasing protein glycation and the gradual build-up of advanced glycation endproducts (AGEs) in body tissues.

Diabetes Res Clin Pract. 2005 Jan;67(1):3-21

### AGEs – ATTRIBUTED TO MICRO & MACRO VASCULAR COMPLICATIONS

Microvascular and macrovascular damage, seen in diabetes, is attributed to the accumulation of AGEs in tissues, but it is also associated with atherosclerosis, Alzheimer's disease, end stage renal disease, rheumatoid arthritis, sarcopenia, cataracts, and other degenerative ophthalmic diseases, Parkinson's disease, vascular dementia and several other chronic diseases.

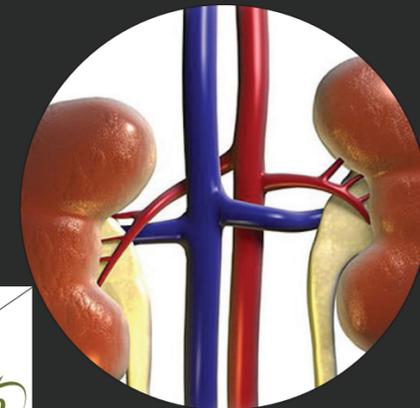
Nutrients 2010, 2, 1247-1265;

## Inhibit AGEs

Inhibiting AGEs is important

# Inage

Inhibit AGEs and Prevent Micro & Macro vascular complications



### Anti-glycation products have therapeutic potential

Considerable interest in anti-glycation compounds because of their therapeutic potential.

Diabetes Res Clin Pract. 2005 Jan;67(1):3-21.

**InAge the synergistic combination that combats AGEs**

**Benfotiamine (100 mg)**

**proven AGE inhibitor**

Benfotiamine Inhibits  
Intracellular Formation of  
Advanced Glycation End Products

**Methylcobalamin (1000 mcg) biological active vitamin**

Methylcobalamin prevents hyperhomocysteinemia

**Inositol (100 mg) Improves insulin sensitivity**

Inositol improves insulin sensitivity.

# Inage

Inhibit AGEs and Prevent Micro & Macro vascular complications



**ALA (100 mg) powerful antioxidant & AGE inhibitor**

Alpha-lipoic acid (ALA) reduces oxidative stress and the formation of advanced glycation end products (AGEs) and improves insulin sensitivity.

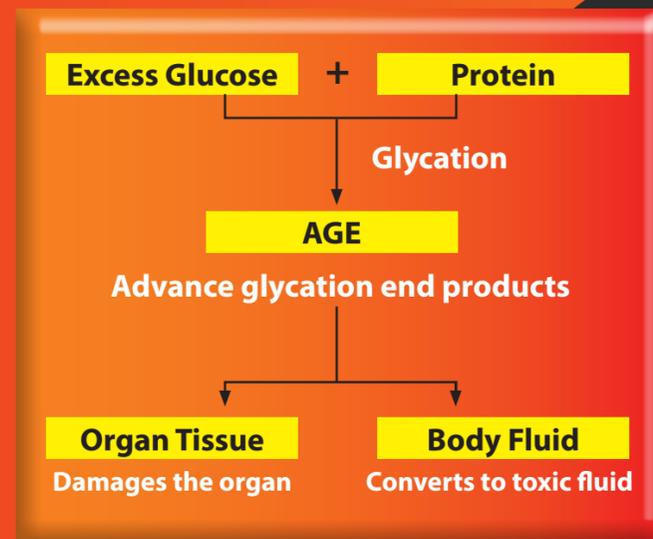
Metabolism. 2008 Oct;57(10):1465-72

## In Female infertility management

### AGE matters

Ovarian function diminishes as the woman ages (age & AGEs)

Advanced Glycation End products interferes with ovarian function



Inhibit AGEs and improve ovarian function

# Inage

Novel treatment strategy for ovarian function

**Dose** 1 caps a day for 3 months

## First direct clinical evidence

### Ovarian dysfunction due to AGEs accumulation

AGE accumulation leads to diminished folliculogenesis and poor oocyte developmental potential.

Human Reproduction, pp. 1–7, 2011

### Benfotiamine inhibits AGEs

Results of this study suggest a novel treatment strategy for ovarian dysfunction by decreasing AGE or AGE effects. Benfotiamine, a lipid soluble thiamine derivative, is thought to inhibit AGE formation by multiple mechanisms.

Concentrations of CML (from 4.1+0.3 to 3.0+0.2 mg/ml) and TAGE (from 3.1+0.03 to 2.0+0.27 U/ml) in follicular fluid were decreased significantly by Benfotiamine,

Human Reproduction, pp. 1–7, 2011

### Alpha Lipoic acid inhibition of AGEs improves ovarian function

Other agents (such as pyridoxamine, carnosine, alpha-lipoic acid, ACE inhibitors) are also potential inhibitors of AGE accumulation (Thomas et al., 2005). Interruption of adverse effects of AGE by soluble RAGE (Koyama et al., 2007) or a RAGE antagonist may be yet another approach applicable to the treatment of ovarian dysfunction.



**Advanced glycation end-products (AGE) are novel markers to predict poor IVF outcomes independently of age and FSH: novel therapy for poor responders**

Abstracts of the 26th Annual Meeting of ESHRE, Rome, Italy, 27 June – 30 June, 2010

**Advanced glycation end-products accumulation compromises embryonic development and achievement of pregnancy by assisted reproductive technology.**

Human Reproduction, 1–7, 2011

**High intrafollicular sRAGE concentrations predicted poor-quality embryos.**

Reproductive BioMedicine Online (2013) 26, 62–67



**Dose** 1 caps a day for 3 months

Inhibit AGEs and improve ovarian function

# Inage

**Novel treatment strategy for ovarian function**

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- Human Reproduction, pp.17, 2011

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### **3 MONTHS TREATMENT WITH INAGE IMPROVES IVF/ICSI SUCCESS**

A pilot treatment with benfotiamine, 75mg per day, for 3 months for seven non-pregnant patients and repeated assisted reproductive technology (ART) and AGE measurements. Concentrations of CML (from 4.1+0.3 to 3.0+0.2mg/ml) in follicular fluid were decreased significantly by Benfotiamine

Human Reproduction pp.17, 2011

**Inhibit AGEs and improve IVF outcome**