Overnutrition:
High fat/meat-rich diet
High sugar diet

Changes in intestinal environment:
- ↑ Ratio of pro-inflammatory bacteria
- ↓ LPS-detoxifying ability
- ↑ Intestinal permeability
- ↑ Translocation of pro-inflammatory bacteria and/or LPS into the blood

Intestinal/systemic inflammation:
- ↑ Blood LPS/fats
- ↑ TLR4 activation
- ↑ NF-κB p50/p65 activation

Changes in metabolism:
- ↑ Adiposity
- ↓ GLUT4 expression by blocking PPARγ activation
- ↑ Blood glucose (insulin resistance)

Probiotics/prebiotics
Optimum nutrition

Obesity
Type 2 diabetes