



CRC

for

Premium

Quality

Wool

# The Effect of Cortisol on Wool Production

Produced for the CRC for Premium Quality Wool undergraduate program by;  
Dr Peter Wynn, The University of Sydney, and  
Dr. Tony Schlink, CSIRO Animal Production.



# Actions of cortisol

- breaks down muscle to release amino acids for essential organs
- repartitions nutrients from muscle
- compromises immune response
- breaks down connective tissue
- induces lipolysis

CRC

for

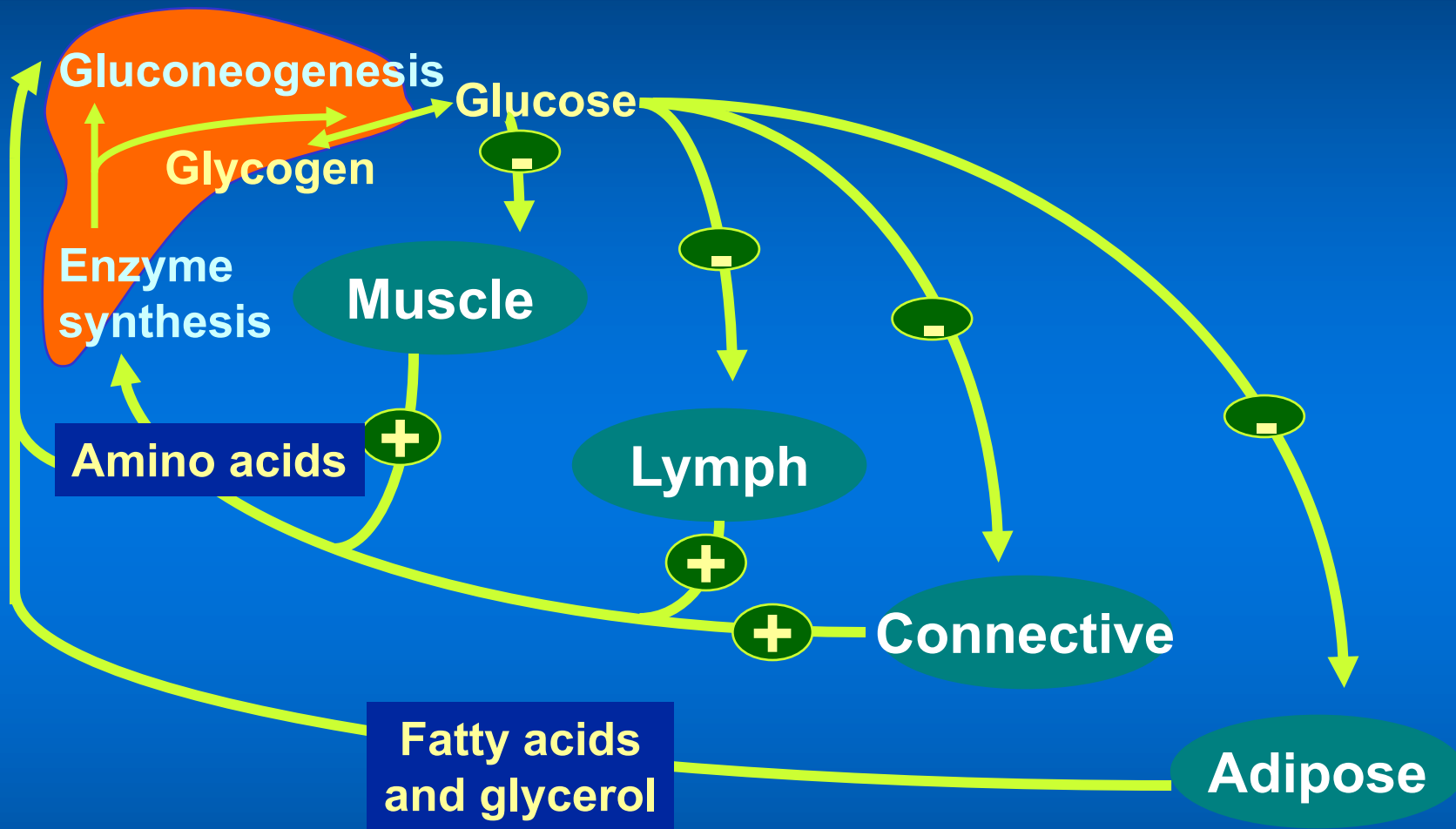
Premium

Quality

Wool



# Cortisol



CRC  
for  
Premium  
Quality  
Wool



# Effect of cortisol on wool production

- depresses wool growth at high concentrations
- may stimulate wool growth at low doses
- analogues inhibit wool growth
  - precursors to biological defleecing
- acts directly on the follicle
  - intradermal injections and cortisol in vitro lead to induction of catagen
- Plasma concentrations must be elevated for a number of days to affect wool growth

CRC

for

Premium

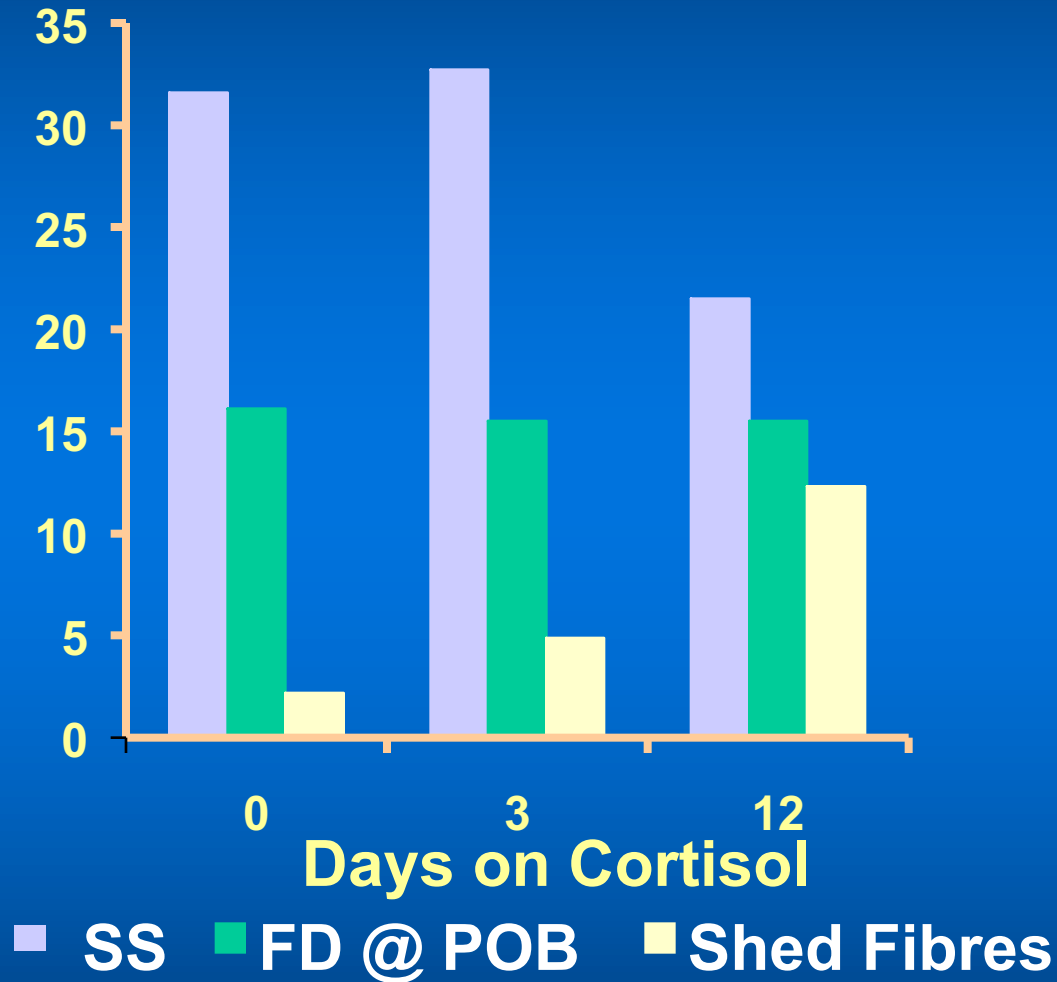
Quality

Wool



# Effect of cortisol on staple strength

CRC  
for  
Premium  
Quality  
Wool



Tony Schlink

Source: Adams and Schlink (1998)