Vitamins and Wool Growth

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Vitamin D

• Radiolabelled Vitamin D3 accumulates in ORS and bulb

• D3 receptors found in papilla and ORS
  – D3 receptor no. varies through hair cycle
  – alopecia occurs in patients with type II rickets
    • a defect in the D3 receptor

• D3 alters fibre growth in culture
  – low levels stimulated growth and high levels depressed growth
Vitamin A

- Varied responses to vitamin A supplementation in sheep
- Retinoids have direct effects on keratinocyte growth and differentiation
- Retinoic acid receptors present in bulb, ORS and keratinising zone
- Vitamin A alters production of IGF binding proteins