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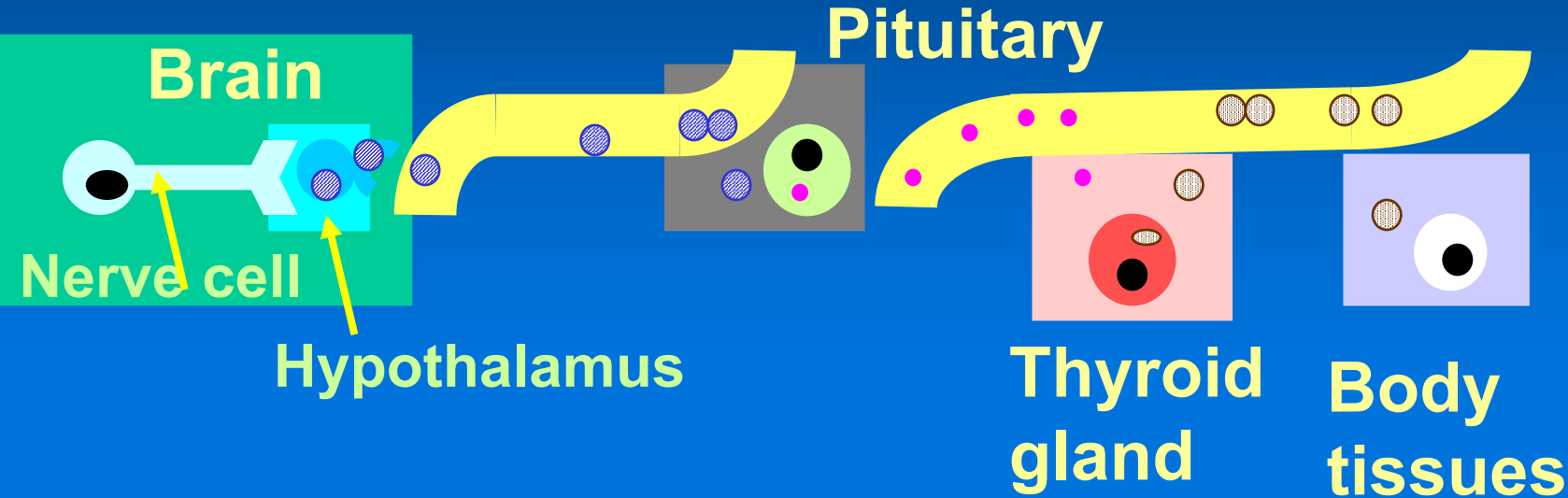
Wool

The Effect of the Thyroid on Wool Production

Produced for the CRC for Premium Quality Wool undergraduate program by;
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Thyroid Hormone



- Thyrotropin releasing hormone (TRH)
- Thyroid stimulating hormone (TSH)
- Triiodothyronine (T3) and thyroxine (T4)

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Effect of thyroxine administration to whole body metabolism

T4 (mg)	Heart rate	Respiration rate	Feed intake	Body temp
0	100	90	17	38
1	125			
2	135	130	30	39
4	185	145	40	40

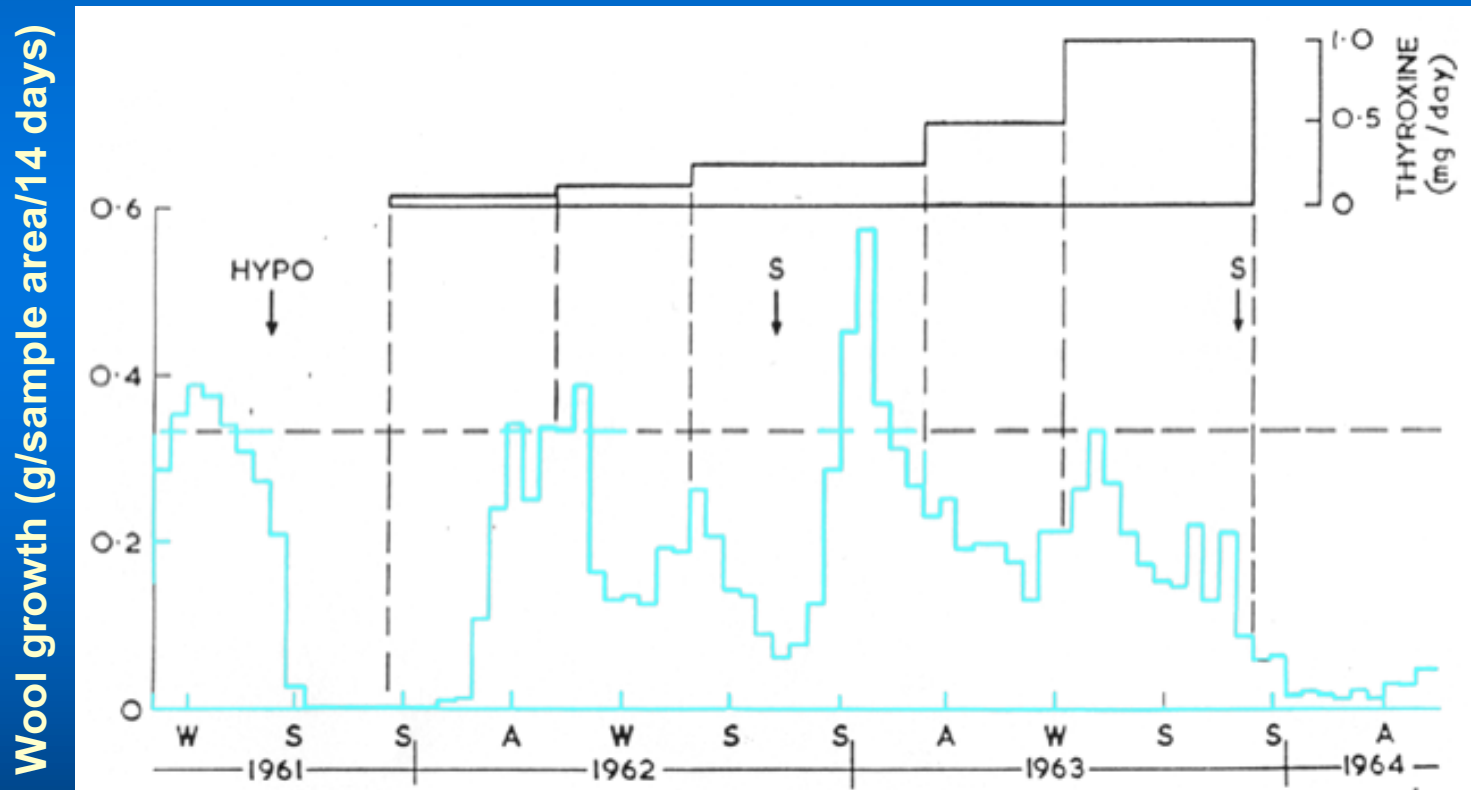
General effect - increased BMR

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Effect of hypophysectomy and increasing doses of thyroid hormones on wool growth

- T4 was replaced in incremental injections
 - restores wool growth to pre-operative rates at minimal levels of T4



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Removal of thyroid decreases wool growth

- wool growth depressed by 60%
 - decrease length, not diameter
 - Bulb cells to move to IRS when no T3
 - wool growth restored by T4 injections

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