

Hormonal treatment

The use of insulin and desmopressin or vasopressin in potential donors is not controversial.

- No RCT evidence to support use of thyroid hormones or steroids in the potential donors.
- Conflicting evidence on the occurrence and clinical significance of hypothalamic-pituitary-adrenal/thyroid dysfunction after brain death.
- It is suggested that thyroid hormone deficiency may decrease mitochondrial function and impair cardiac function, and that this, along with cortisol deficiency, contributes to haemodynamic instability.
- Most human studies show that anterior pituitary function is partially preserved, with normal cortisol and T4 levels, or low T4 with normal or increased TSH consistent with sick euthyroid syndrome.
- Cardiac transplant units often request T3 for potential donors with haemodynamic instability in conjunction with invasive monitoring or echocardiography.
- Some lung transplant units will request hydrocortisone in ICU, methylprednisolone 15 mg/kg in the OR due to an association between steroid use, donor lung oxygenation, lung recovery and transplantation but this lacks support from RCTs.
- Hormone supplement regimens that have been used include those listed in Table 2.3.

Table 2.3: Hormonal treatment

	Adult	Paediatric
Vasopressin	0.5–4.0 U/h*	0.02–0.04 U/kg/h
Tri-iodothyronine (T3)	IV 3 µg/h until retrieval	0.05–0.2 µg/kg/h
Methylprednisolone	15 mg/kg IV single bolus	15 mg/kg IV single bolus

- * Most protocols recommend a dose of 0.5–4 U/h, although it has been suggested that vasopressin doses greater than 2.4 U/h may cause regional ischaemia.