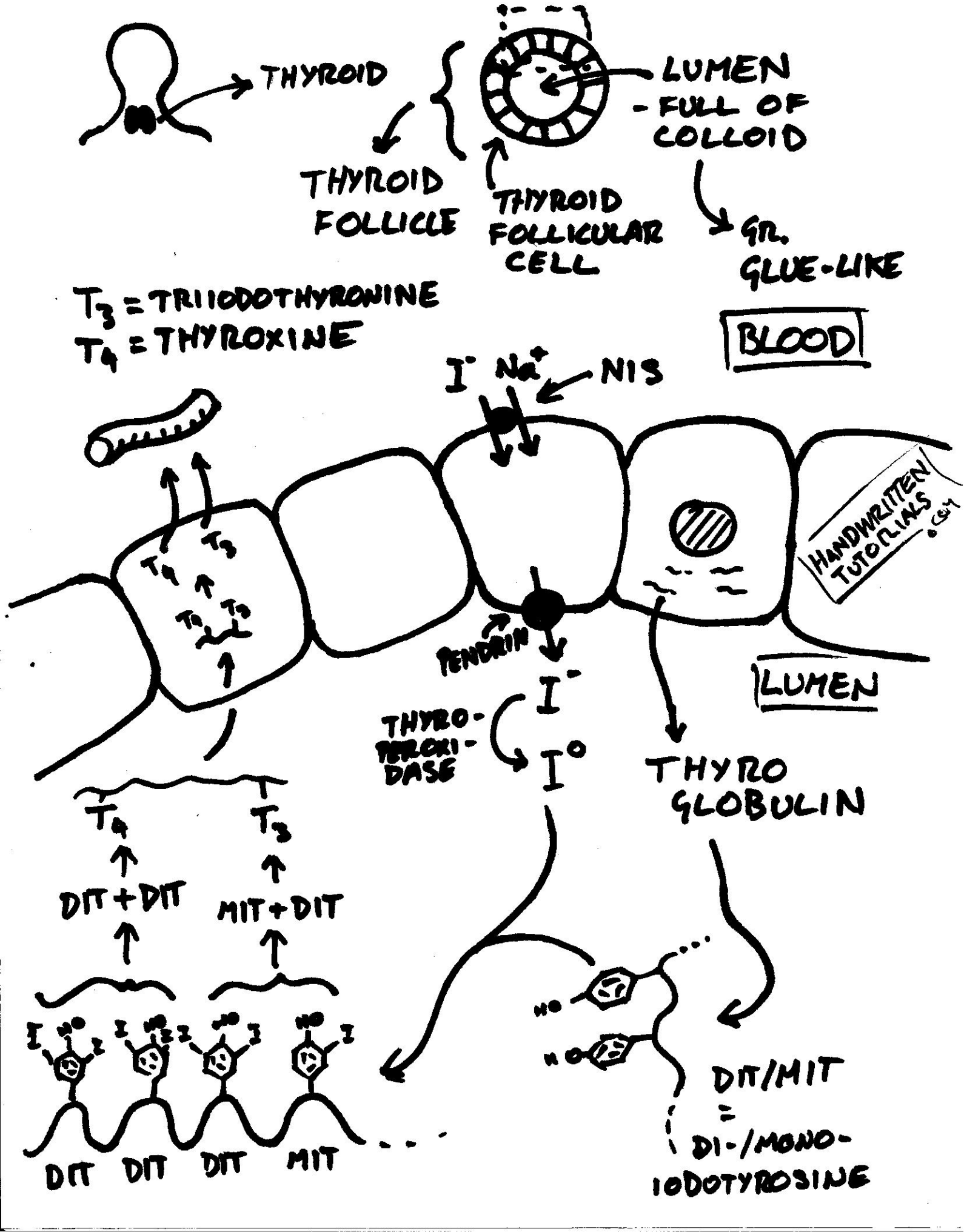THYROID HORMONE PRODUCTION