thereby increasing dopamine turnover. On the other hand the noradrenaline and 5-hydroxytryptamine systems do not seem to be influenced. (Since this work was completed Ahtee (1975) has also independently reported that metoclopramide causes a rise in whole brain HVA.)

It remains to be discovered why metoclopramide given to parkinsonian patients does not increase the severity of the parkinsonian syndrome, and does not affect the intensity of L-DOPA induced dyskinesias (Tarsy, Parkes & Marsden, 1975). It is also surprising that metoclopramide has little, if any, antipsychotic activity (Borenstein & Bles, 1965) in view of the current suggestion that this property is associated with the capacity to block cerebral dopamine receptors particularly those in the mesolimbic area (Van Rossum, Janssen, Boissier, Julou, Loew, Moller Nielsen, Munkrad, Randrup, Stille & Tedeschi, 1970; Costall & Naylor, 1973).

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Measurement of metabolism of resting and exercising human skeletal muscle *in situ.*

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Forearm blood flow is measured by the venous occlusion plethysmographic method and the flow through the muscle determined from the measured total forearm flow (Cooper, Edholm & Mottram, 1955). By catheterization of deep forearm veins from the antecubital fossa it is possible to obtain samples that are predominantly muscle effluent blood (Coles, Cooper, Mottram & Occleshaw, 1958). The simultaneous sampling of arterial blood enables arterio-venous differences across the muscles to be determined of various substances of metabolic importance. A.-V. differences multiplied by blood flow rates give the metabolic turn-over rates for these substances. Use of an isometric hand-grip ergometer, with hand grips of 5 or 10% of subjects' maximal power, allows the blood flow and sampling techniques to be performed while the muscle is exercising under controlled conditions as well as at rest (Baker & Mottram, 1973).

We are developing these methods to study the actions of substances, both naturally occurring hormones and pharmacological agents, believed to affect the tissue's metabolic activity.

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