

# Letters to the Editor

## Physical Activity and Lipemia Clearance

One of the most dramatic events which follows the ingestion of a high fat meal is the appearance of lactescence. Unlike other nutrients which enter the blood quickly and are cleared rapidly, postprandial lipemia reaches its peak only after some three hours and remains high for several hours more. Persons with evidence of ischemic heart disease exhibit more marked and more prolonged hyperlipemia than normal persons.<sup>1-4</sup> Excessive triglyceride concentration in plasma may accelerate blood clotting,<sup>5</sup> decrease fibrinolysis,<sup>6</sup> interfere with tissue oxygen uptake<sup>7,8</sup> and induce anginal attacks.<sup>9</sup>

We have observed that the clearance of fat was more rapid in dogs exposed to a stressful situation, during which large increases in catecholamine and corticoid excretion occurred, than in dogs in the control state.<sup>10</sup> Although the opposite effect was expected, it was observed that the increased clearance correlated with the increased muscular activity which occurred during the period of stress. Several other investigators have also observed increased lipemia clearance following physical exertion.<sup>11,12</sup> An explanation has been offered for the occurrence of a myocardial infarction when a person is at rest or asleep some hours after emotional stress.<sup>13</sup> It was pointed out that peak levels of lipemia following a meal could coincide with peak levels of plasma corticoids following a stressful situation. This would increase sensitivity to the action of epinephrine with regard to inhibition of lipemia clearance, acceleration of blood clotting and increase in vasoactivity.

These arguments suggest that a fat meal should not be consumed if the subject will be at rest or asleep several hours later—that a high fat meal should be ingested only when increased physical activity will follow several hours later. This would require the major meal to be consumed in the morning and only a small meal be taken in the evening. This practice should be

particularly observed by older persons who exhibit delayed fat clearance and by persons who show evidence of atherosclerotic vascular disease.

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