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METABOLIC EFFECTS OF ORAL CONTRACEPTIVES

Oral contraceptives are now being used by about 18.5 million women throughout the world (1); and it is possible that the metabolic changes associated with this treatment (2) may modify biochemical processes in all body-tissues. More than fifty metabolic changes have been recorded and they include: altered carbohydrate and lipid metabolism (2); raised circulating levels of serum iron, copper, cortisol, thyroxine, insulin, and growth hormone (2); raised serum-transaminase levels and increased retention of bromsulphthalein (2); raised renin-substrate levels and increased aldosterone secretion (2); decreased serum and urine magnesium (3) and plasma-zinc levels (4); increased urine excretion of δ-aminolaevulic acid (5); low serum and red-cell folate levels and abnormal urine FIGLU excretion after histidine loading (6); altered platelet behaviour, similar to that found in atherosclerosis, (7) and increased circulating levels of certain blood coagulation factors, including factors VII, IX, and fibrinogen (2); and a disturbance of tryptophan metabolism suggestive of vitamin-B_6 depletion. (2) These changes are unnecessary for contraception and their ultimate effect on the health of the user is unknown. The evidence suggests that many of the metabolic changes in women receiving oestrogen-progestagen combinations may not arise with low-dose progestagen treatment. (2) Unfortunately, however, a disturbing incidence of menstrual irregularity and pregnancy has been recorded during trials of these latter compounds.

It is clearly important to determine the proportion of women affected by these metabolic changes, and the two papers from the Simpson Laboratory at St. Mary's Hospital, London, which we publish this week examine the effects

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NOTE.—Numbered references at end of article.