Carcinogenicity of combined hormonal contraceptives and combined menopausal treatment

In June 2005, the International Agency for Research on Cancer (IARC) convened a meeting of experts to review the scientific evidence on the carcinogenic risks to humans posed by combined estrogen-progestogen oral contraceptives (COCs) and combined estrogen-progestogen hormonal menopausal therapy. The outcome of this meeting will be an IARC Monograph, to be published in 2006 (1).

This was an update of a similar review undertaken by IARC on these formulations and published as an IARC Monograph in 1999 (2). At that time, COCs were classified as “carcinogenic to humans” (Group 1) and combined hormonal menopausal therapy as “possibly carcinogenic to humans” (Group 2B). On the basis of the evidence accumulated since then, this new review confirmed the classification of COCs and changed the classification of combined hormonal menopausal therapy to “carcinogenic to humans” (Group 1).

A summary of the new review by IARC was published in Lancet Oncology this month (3). The evidence available to this recent review is not new, but was published several years ago and was assessed by scientific bodies at that time and widely discussed in the media. It is only the updating of the IARC classification that is new.

IARC regularly convenes groups of international experts to evaluate the carcinogenic risks to humans posed by a variety of agents, combinations of agents and exposures. Their conclusions are published in the IARC Monographs series. It is important to note that IARC do not evaluate the overall risk-benefit profile of compounds in public health terms, even in terms of overall cancer risk for compounds that have a protective effect on some cancers and increase the risk of some others.

Combined oral contraceptives

As stated in IARC’s review, the use of COCs modifies slightly the risk of cancer, increasing it in some sites (cervix, breast, liver), decreasing it in others (endometrium, ovary). Some of these data refer to older higher-dose COC preparations. Assessments based on risk-benefit calculations are carried out by different teams within WHO. Several WHO committees work on creating evidence-based family planning guidelines and on keeping them up-to-date on a continuous basis. They regularly review the safety of COCs and assess the balance of risks and benefits of COC use and they have determined that for most healthy women, the health benefits clearly exceed the health risks.

Hormonal menopausal therapy

With regard to hormonal menopausal therapy, recent studies have shown an increased risk of breast cancer in women who used combined regimens and an increased risk of endometrial cancer when these combined regimens included less than ten days of progestogens per month. WHO's statement, published at the time of the publication of these studies, remains valid [http://www.who.int/mediacentre/news/notes/note02/en/index.html]: “The study results point to an increased risk of developing breast cancer for women on this combined hormonal replacement
treatment. This reinforces the general importance of breast cancer screening by mammography for all women over 50 years of age, a recommendation endorsed by WHO as proven to reduce breast cancer mortality".

(1) IARC. IARC monographs on the evaluation of carcinogenic risks to humans, volume 91, combined estrogen-progestogen contraceptives and combined estrogen-progestogen menopausal therapy. Lyon (in press).

(2) IARC. IARC monographs on the evaluation of carcinogenic risks to humans, volume 72, hormonal contraception and post-menopausal hormonal therapy. Lyon (1999).