Bulletin électronique de veille Cancer Environnement
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Ce bulletin de veille signale mensuellement une sélection de documents identifiés dans le cadre de la veille cancer environnement. La méthodologie mise en œuvre est présentée dans la fiche du site cancer environnement : http://www.cancer-environnement.fr/334-Veille-scientifique.ce.aspx

Publications récentes

**Parental occupational exposure to pesticides as risk factor for brain tumors in children and young adults: a systematic review and meta-analysis.**

Exposition professionnelle des parents aux pesticides comme facteur de risque de tumeurs cérébrales chez les enfants et les jeunes adultes: une revue systématique de la littérature et méta-analyse.

Van Maele-Fabry G, Environ Int. 2013

To examine the potential association between parental occupational exposure to pesticides and the occurrence of brain tumors in children and young adults. Studies identified from a MEDLINE search through 15 January 2013 and from the reference lists of identified publications were submitted to a systematic review and meta-analysis. Relative risk estimates were extracted from 20 studies published between 1974 and 2010. Most of the retrieved studies involved farm/agricultural jobs. Summary ratio estimates (SR) were calculated according to fixed and random-effect meta-analysis models. Separate analyses were conducted after stratification for study design, exposure parameters, disease definition, geographic location and age at diagnosis. Statistically significant associations were observed for parents potentially exposed to pesticides in occupational settings and the occurrence of brain tumor in their offspring after combining all case-control studies (summary odds ratio [SOR]: 1.30; 95%: 1.11, 1.53) or all cohort studies (summary rate ratio [SRR]: 1.53; 95% CI: 1.20, 1.95). Significantly increased risks were seen for prenatal exposure windows, for either exposed parent, for exposure defined as to pesticides as well as by occupational/industry title, for astroglial brain tumors and after combining case-control studies from North America or cohort studies from Europe. This meta-analysis supports an association between parental occupational exposure to pesticides and brain tumors in children and young adults, and adds to the evidence leading to the recommendation of minimizing (parental) occupational exposure to pesticides. These results must, however, be interpreted with caution because the impact of work-related factors others than pesticide exposure is not known.
Night-shift work and risk of breast cancer: a systematic review and meta-analysis.

A 2007 report by the International Agency for Research on Cancer classified night-shift work as possibly carcinogenic to humans, emphasizing, in particular, its association with breast cancer. Since this report and the publication of the last systematic review on this topic, several new studies have examined this association. Hence, to provide a comprehensive update on this topic, we performed a systematic review and meta-analysis. We searched Medline, Embase, CINAHL, Web of Science (Conference Proceedings), and ProQuest dissertations for studies published before March 1, 2012, along with a manual search of articles that cited or referenced the included studies. Included were observational case-control or cohort studies examining the association between night-shift work and breast carcinogenesis in women, which all ascertained and quantified night-shift work exposure. The search yielded 15 eligible studies for inclusion in the systematic review and meta-analysis. Using random-effects models, the pooled relative risk (RR) and 95% confidence intervals (CIs) of breast cancer for individuals with ever night-shift work exposure was 1.21 (95% CI, 1.00-1.47, p = 0.056, I² = 76%), for short-term night-shift workers (<8 years) was 1.13 (95% CI, 0.97-1.32, p = 0.11, I² = 79%), and for long-term night-shift workers (≥8 years) was 1.04 (95% CI, 0.92-1.18, p = 0.51, I² = 55%), with substantial between-study heterogeneity observed in all analyses. Subgroup analyses suggested that flight attendants with international or overnight work exposure and nurses working night-shifts long-term were at increased risk of breast cancer, however, these findings were limited by unmeasured confounding. Overall, given substantial heterogeneity observed between studies in this meta-analysis, we conclude there is weak evidence to support previous reports that night-shift work is associated with increased breast cancer risk.

Association between physical activity and mortality in colorectal cancer: A meta-analysis of prospective cohort studies
Je Y, Int J Cancer, 2013

Several prospective cohort studies have examined the association between prediagnosis and/or postdiagnosis physical activity (PA) on colorectal cancer outcomes and reported conflicting results. To quantitatively assess this association, we have conducted a meta-analysis of prospective studies. Databases and reference lists of relevant studies were searched using MEDLINE and EMBASE up to January 2013. Pooled relative risks (RRs) with 95% confidence intervals (CIs) were calculated using random-effects models. For this meta-analysis, a total of seven prospective cohort studies were included. The analysis included 5,299 patients for prediagnosis PA and 6,348 patients for postdiagnosis PA, followed up over a period ranging from 3.8 to 11.9 years. The analyses showed that patients who participated in any amount of PA before diagnosis had a RR of 0.75 (95% CI: 0.65-0.87, p < 0.001) for colorectal cancer-specific mortality compared to patients who did not participate in any PA. Those who participated in high PA before diagnosis (vs. low PA) had a RR of 0.70 (95% CI: 0.56-0.87, p = 0.002). Similarly, patients who participated in any PA after diagnosis had a RR of 0.74 (95% CI: 0.58-0.95, p = 0.02) for colorectal cancer-specific mortality compared to patients who did not participate in any PA. Those who participated in high PA after diagnosis (vs. low PA) had a RR of 0.65 (95% CI: 0.47-0.92, p = 0.01). Similar inverse associations of prediagnosis or postdiagnosis PA were found for all-cause mortality. In conclusion, both prediagnosis and postdiagnosis PA were associated with reduced colorectal cancer-specific mortality and all-cause mortality.
Exposure to air pollution during pregnancy has been linked to the risk of childhood cancer, but the evidence remains inconclusive. In the present study, we used land use regression modeling to estimate prenatal exposures to traffic exhaust and evaluate the associations with cancer risk in very young children. Participants in the Air Pollution and Childhood Cancers Study who were 5 years of age or younger and diagnosed with cancer between 1988 and 2008 were had their records linked to California birth certificates, and controls were selected from birth certificates. Land use regression-based estimates of exposures to nitric oxide, nitrogen dioxide, and nitrogen oxides were assigned based on birthplace residence and temporally adjusted using routine monitoring station data to evaluate air pollution exposures during specific pregnancy periods. Logistic regression models were adjusted for maternal age, race/ethnicity, educational level, parity, insurance type, and Census-based socioeconomic status, as well as child's sex and birth year. The odds of acute lymphoblastic leukemia increased by 9%, 23%, and 8% for each 25-ppb increase in average nitric oxide, nitrogen dioxide, and nitrogen oxide levels, respectively, over the entire pregnancy. Second- and third-trimester exposures increased the odds of bilateral retinoblastoma. No associations were found for annual average exposures without temporal components or for any other cancer type. These results lend support to a link between prenatal exposure to traffic exhaust and the risk of acute lymphoblastic leukemia and bilateral retinoblastoma.
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« La relecture et sélection des publications de ce bulletin électronique est réalisée par des membres du comité éditorial du portail cancer-environnement.fr avec la participation des professionnels de santé du Centre Léon Bérard et ses partenaires, sur la base de leur pertinence dans le champ ‘cancer, environnement et nutrition’. Dans la mesure où le contenu des sources et des informations recensées dans ce e-bulletin n’engagent que leurs auteurs, il appartient au lecteur d’en évaluer la qualité. »