



Title	Sleep duration and risk of breast cancer : The JACC Study
Author(s)	曹, 金紅
Citation	大阪大学, 2019, 博士論文
Version Type	
URL	https://hdl.handle.net/11094/72486
rights	
Note	やむを得ない事由があると学位審査研究科が承認したため、全文に代えてその内容の要約を公開しています。全文のご利用をご希望の場合は、大阪大学の博士論文についてをご参照ください。

The University of Osaka Institutional Knowledge Archive : OUKA

<https://ir.library.osaka-u.ac.jp/>

The University of Osaka

論文審査の結果の要旨及び担当者

(申請者氏名) 曹 金紅

	(職) 氏 名
論文審査担当者	主 査 大阪大学教授 磯 博 康
	副 査 大阪大学教授 野 口 眞 三 郎
	副 査 大阪大学教授 相 江 友 孝

論文審査の結果の要旨

Breast cancer is the most common cancer among Japanese women followed by colon and rectum cancers. The association between sleep duration and risk of breast cancer among women has a complex nature and remains controversial, especially in Asia.

Melatonin is suggested as an agent in the association between sleep duration and breast cancer, and darkness during sleep stimulates the release of melatonin. Melatonin may inhibit breast tumorigenesis directly by inhibiting mammary cell proliferation and invasiveness, and indirectly by decreasing estrogen levels via a down-regulation of the hypothalamic-pituitary reproductive axis and regulating the activity of the aromatases, the enzymes responsible for the local estrogens synthesis. Furthermore, menopausal status was associated with risk of breast cancer because of aging, higher levels of adiposity, or endogenous estrogen. Meanwhile, abundant previous findings have also shown parity as an indicator for breast cancer risk.

This is a prospective study of 34,350 women aged 40-79 years in whom sleep duration, and menstrual and reproductive histories were determined by a self-administered questionnaire. The follow-up period was from 1988 to 2009, and hazard ratios (HRs) with 95% confidence intervals (CIs) of breast cancer incidence were calculated for shorter sleep durations in reference to sleep duration of ≥ 8 h/day by Cox proportional hazard models. During 19.2-year median follow-up period with 236 cases, this study found a significant inverse association between sleep duration and risk of breast cancer, especially among postmenopausal women and women with low parity (nulliparous and women with < 3 children). Health education to women about the need for proper sleep duration is suggested and further research is needed to confirm the observed associations.

Therefore, this doctoral dissertation by Jinhong Cao has sufficient value and fulfilled the degree of eligibility to be awarded a doctor of philosophy in Social medicine (medicine).

論 文 内 容 の 要 旨

Synopsis of Thesis

氏 名 Name	曹 金紅 ソウ キンコウ
論文題名 Title	Sleep duration and risk of breast cancer : The JACC Study (睡眠時間と乳がんリスク : JACC研究)
論文内容の要旨 〔目 的(Purpose)〕 The evidence on beneficial or adverse effects of sleep duration on risk of breast cancer remains controversial and limited, especially in Asia. 〔方法ならびに成績(Methods/Results)〕 A prospective study of 34 350 women aged 40-79 years in whom sleep duration, menstrual and reproductive histories were determined by a self-administered questionnaire. The follow-up period was from 1988 to 2009, and hazard ratios (HRs) with 95% confidence intervals (CIs) of breast cancer incidence were calculated for shorter sleep duration in reference to sleep duration of ≥ 8 h/d by Cox proportional hazard models. During 19.2-year median follow-up (236 cases identified), we found a significant inverse association between sleep duration and risk of breast cancer, especially among postmenopausal women and women with low parity (nulliparous and women with < 3 children); the multivariable HRs (95% CIs) among postmenopausal women who reported 7 h/d and ≤ 6 h/d of sleep in reference to ≥ 8 h/d were 1.49 (0.81-2.76) and 1.98 (1.08-3.70) (P for trend = 0.028), and those values among women with low parity were 1.50 (0.96-2.35) and 1.76 (1.01-2.79) (P for trend = 0.018). 〔総 括(Conclusion)〕 Short sleep duration was associated with increased risk of incident breast cancer, especially among postmenopausal women and women with low parity.	