

大学院医学研究科 発達環境医学分野の紹介



胎児・子どもの健康や疾病に関わる要因として、遺伝素因と環境要因があります。遺伝素因は変えることはできませんが、胎生期と生後の環境を改善することで、疾病を予防あるいは軽減できる可能性があります。

2019年秋に新設された本研究室では、胎児・子どもがより健やかに発達できるように環境づくりを目指した研究を行っていきます。環境省の国家プロジェクトである【子どもの健康と環境に関する全国調査・エコチル調査】などのビッグデータを用いて、研究を遂行中です。

現在の主なキーワード

- 子どもの発達；
 - ・子どもの先天性形態異常
 - ・子どもの神経発達



- 環境要因；
 - ・妊婦の医薬品・サプリメント使用
 - ・両親の周産期メンタルヘルス



医師・助産師・看護師等で興味のある方の参加をお待ちしています。

主な研究テーマの概要



妊婦の医薬品使用と子どもの発達 —わが国独自のエビデンス創出に向けて—

日本では、妊婦の医薬品・サプリメント使用と子どもの発達を疫学的に検証する基盤が存在しなかったために、欧米などの知見に基づいて情報提供が行われているのが現状です。

しかし最近、我々は、妊婦の医薬品使用による先天形態異常発症の感受性が、日本人と欧米では異なる可能性を報告しました。したがって、わが国独自の遺伝素因の違いも考慮した妊婦の医薬品使用と先天性形態異常リスクの関連因子の解明が必要であり、これらの情報に基づいた妊娠中の医薬品選択・用量設定等を考慮した個別化医療が必要です。

また例えば、妊娠初期のバルプロ酸の使用は、神経管閉鎖障害等を引き起こすことが報告されています。しかし、海外の知見では妊娠初期に高用量($\geq 1000\text{mg/日}$)のバルプロ酸を使用した場合であっても先天性形態異常の発症率は約25%であり、残りの75%には先天奇形は認められていません。その他にも妊娠初期の使用により先天性形態異常リスクを上昇させる医薬品が報告されていますが、その発症率は高くても10%程度です。したがって、異常を発症しない妊婦・胎児の遺伝素因や環境要因を明らかにできれば、妊婦が医薬品を安全に使用できるような環境づくりにつながります。

日本で蓄積されつつあるビッグデータ・情報基盤を用いて、わが国独自のエビデンス創出を行っていきます。

父親と母親の周産期メンタルヘルスと子どもの神経発達



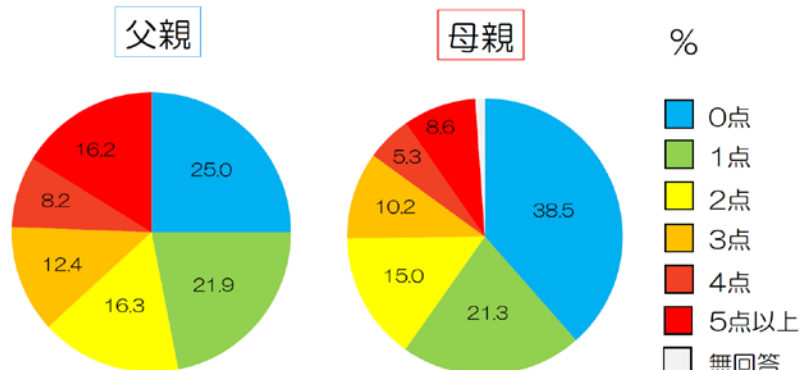
東日本大震災以降、周産期メンタルヘルスの重要性がさらに注目されてきました。周産期メンタルヘルス異常は、特に子どもの神経発達に影響を与えます。ただし、わが国では母親(妊産婦・褥婦)の研究は盛んに行われてきましたが、父親に着目した研究が少ないのが現状です。

我々は、父親の産後うつリスクとボンディング障害が、母親と同様の頻度であること明らかにしました。また、父親のボンディング障害のリスク因子として①妊婦へのドメスティックバイオレンス既往と②母親のボンディング障害であることを世界ではじめて報告しました。ボンディング障害とは、乳幼児に対して「愛おしい」「守ってあげたい」というような感情を抱けない障害です。

父親と母親の周産期メンタルヘルスの経時的変化や関係性、その子どもの神経発達などの影響についてさらに解析を進めていきます。

ボンディング障害

あかちゃんへの気持ち質問票(最高30点)



産後1か月1008組

妊婦の医薬品・サプリメント使用と子どもの発達

主な業績: 原著論文



1. Preconception folic acid supplementation use and the occurrence of neural tube defects in Japan: A nationwide birth cohort study of the Japan Environment and Children's Study.
Nishigori H, Obara T, Nishigori T, Ishikuro M, Sakurai K, Hoshiai T, Saito M, Fujiwara I, Arima T, Nakai K, Kuriyama S, Mano N, Metoki H, Yaegashi N; Japan Environment & Children's Study Group.
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Pharmacoepidemiol Drug Saf. 2018;27(12):1325-1334.
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Nishigori H, Obara T, Nishigori T, Mizuno S, Metoki H, Hoshiai T, Watanabe Z, Sakurai K, Ishikuro M, Tatsuta N, Nishijima I, Fujiwara I, Kuriyama S, Arima T, Nakai K, Yaegashi N; Japan Environment & Children's Study Group.
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8. Prevalence and determinants of inadequate use of folic acid supplementation in Japanese pregnant women: the Japan Environment and Children's Study .
Obara T, Nishigori H, Nishigori T, Metoki H, Ishikuro M, Tatsuta N, Mizuno S, Sakurai K, Nishijima I, Murai Y, Fujiwara I, Arima T, Nakai K, Mano N, Yaegashi N, Kuriyama S; JECS group.
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9. Prescription trends in children with pervasive developmental disorders: a claims data-based study in Japan.
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Nishigori H, Kagami K, Nishigori H.
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周産期メンタルヘルス

主な業績: 原著論文



1. Interannual Changes in the Prevalence of Intimate Partner Violence Against Pregnant Women in Miyagi Prefecture After the Great East Japan Earthquake: The Japan Environment and Children's Study.
Tanoue K, Nishigori H, Watanabe Z, Tanaka K, Sakurai K, Mizuno S, Ishikuro M, Obara T, Tachibana M, Hoshiai T, Saito M, Sugawara J, Tatsuta N, Fujiwara I, Kuriyama S, Arima T, Nakai K, Yaegashi N, Metoki H, and Japan Environment & Children's Study Group
J Interpers Violence. 2019 [Epub ahead of print]
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Yoshimasu K, Sato A, Miyauchi N, Tsuno K, Nishigori H, Nakai K, Arima T; Japan Environment and Children's Study Group.
Reprod Biomed Soc Online. 2017;5:5-16.
6. Pregnant Women's Awareness of Social Capital in the Great East Japan Earthquake-Affected Areas of Miyagi Prefecture: The Japan Environment and Children's Study.
Nishigori H, Nishigori T, Sakurai K, Mizuno S, Obara T, Metoki H, Watanabe Z, Iwama N, Ishikuro M, Tatsuta N, Nishijima I, Sugawara J, Kuriyama S, Fujiwara I, Arima T, Nakai K, Takahashi F, Yaegashi N; Japan Environment & Children's Study Group.
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7. Selective serotonin reuptake inhibitors and risk of major congenital anomalies for pregnancies in Japan: A nationwide birth cohort study of the Japan Environment and Children's Study.
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Sakurai K, Nishigori H, Nishigori T, Mizuno S, Obara T, Iwama N, Watanabe Z, Ishikuro M, Tatsuta N, Nishijima I, Sugawara J, Fujiwara I, Arima T, Kuriyama S, Metoki H, Takahashi F, Nakai K, Yaegashi N; Japan Environment & Children's Study Group.
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9. Fermented Food Consumption and Psychological Distress in Pregnant Women: A Nationwide Birth Cohort Study of the Japan Environment and Children's Study.
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12. Correlation Between the Great East Japan Earthquake and Postpartum Depression: A Study in Miyako, Iwate, Japan.
Nishigori H, Sasaki M, Obara T, Nishigori T, Ishikuro M, Metoki H, Sugawara J, Kuriyama S, Hosoyachi A, Yaegashi N, Kobayashi T, Yoshizumi N.
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Nishigori H, Sugawara J, Obara T, Nishigori T, Sato K, Sugiyama T, Okamura K, Yaegashi N.
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エコチル調査関連 原著論文



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Tanoue K, Nishigori H, Watanabe Z, Tanaka K, Sakurai K, Mizuno S, Ishikuro M, Obara T, Tachibana M, Hoshiai T, Saito M, Sugawara J, Tatsuta N, Fujiwara I, Kuriyama S, Arima T, Nakai K, Yaegashi N, Metoki H, and Japan Environment & Children's Study Group
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Nishigori H, Obara T, Nishigori T, Metoki H, Mizuno S, Ishikuro M, Sakurai K, Hamada H, Watanabe Z, Hoshiai T, Arima T, Nakai K, Kuriyama S, Yaegashi N; Miyagi Regional Center of Japan Environment & Children's Study Group.
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7. Preconception dysmenorrhea as a risk factor for psychological distress in pregnancy: The Japan Environment and Children's Study.
Watanabe Z, Nishigori H, Tanoue K, Tanaka K, Iwama N, Satoh M, Murakami T, Nishigori T, Mizuno S, Sakurai K, Ishikuro M, Obara T, Tatsuta N, Saito M, Tachibana M, Fujiwara I, Arima T, Takeda T, Kuriyama S, Nakai K, Yaegashi N, Metoki H; Japan Environment & Children's Study Group.
J Affect Disord. 2019 ;245:475-483.
8. Association between alcohol consumption during pregnancy and hypertensive disorders of pregnancy in Japan: the Japan Environment and Children's Study.
Iwama N, Metoki H, Nishigori H, Mizuno S, Takahashi F, Tanaka K, Watanabe Z, Saito M, Sakurai K, Ishikuro M, Obara T, Tatsuta N, Nishijima I, Sugiyama T, Fujiwara I, Kuriyama S, Arima T, Nakai K, Yaegashi N; Japan Environment & Children's Study Group.
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9. Blood pressure changes during twin pregnancies: the Japan Environment and Children's Study.
Iwama N, Metoki H, Nishigori H, Mizuno S, Takahashi F, Tanaka K, Watanabe Z, Saito M, Sakurai K, Ishikuro M, Obara T, Tatsuta N, Nishijima I, Sugiyama T, Fujiwara I, Kuriyama S, Arima T, Nakai K, Yaegashi N; Japan Environment & Children's Study Group.
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11. Update on the prevalence and determinants of folic acid use in Japan evaluated with 91,538 pregnant women: the Japan Environment and Children's Study. Ishikawa T, Obara T, Nishigori H, Nishigori T, Metoki H, Ishikuro M, Tatsuta N, Mizuno S, Sakurai K, Nishijima I, Murai Y, Fujiwara I, Arima T, Nakai K, Yaegashi N, Kuriyama S, Mano N. *J Matern Fetal Neonatal Med*. 2018 [Epub ahead of print]
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17. Fermented Food Consumption and Psychological Distress in Pregnant Women: A Nationwide Birth Cohort Study of the Japan Environment and Children's Study. Takahashi F, Nishigori H, Nishigori T, Mizuno S, Obara T, Metoki H, Sakurai K, Ishikuro M, Iwama N, Tatsuta N, Nishijima I, Fujiwara I, Arima T, Nakai K, Sugiyama T, Kuriyama S, Yaegashi N; Japan Environment & Children's Study Group.
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18. Association between social capital and the prevalence of gestational diabetes mellitus: An interim report of the Japan Environment and Children's Study. Mizuno S, Nishigori H, Sugiyama T, Takahashi F, Iwama N, Watanabe Z, Sakurai K, Ishikuro M, Obara T, Tatsuta N, Nishijima I, Fujiwara I, Arima T, Kuriyama S, Metoki H, Nakai K, Inadera H, Yaegashi N; Japan Environment & Children's Study Group.
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20. Prevalence and determinants of inadequate use of folic acid supplementation in Japanese pregnant women: the Japan Environment and Children's Study (JECS). Obara T, Nishigori H, Nishigori T, Metoki H, Ishikuro M, Tatsuta N, Mizuno S, Sakurai K, Nishijima I, Murai Y, Fujiwara I, Arima T, Nakai K, Mano N, Yaegashi N, Kuriyama S; JECS group.
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