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| ***Supplemental File 2.*** *Study characteristics of studies reporting prevalence of GERD symptoms* | | | | | | | | | | | | | | | |
| **Year, author** | **Country** | | **Design** | | **Setting and population** | **Dure** | | **Sample size** | | **Method of data collection** | **Definition** | | **Prevalence** | | **Associated factors** |
| **Infants** (n=11 studies) | | | | | | | | | | | | | | | |
| **2018, Robin** | | United States | Cross-sectional study | Mothers of children aged 0-18 years recruited via online survey pannels by CINT during the first week of May 2016. Mean age of cohort 8.4 ± 5.2y; mean age of infants only not provided. | | 3w | | | Infants: 58, total sample 1255 | Rome IV Pediatric Diagnostic Questionnaire (RIV-PDQ) | Regurgitation (Rome IV criteria, in infants <1y only) | | 24.1% | | *Analysis not performed.* |
| **2017, Chen** | | United States | Prospective cohort study | Infant Feeding Practices Study II (IFPS II), a study of infant feeding and care practices throughout the first year of life. A nationally distributed consumer opinion panel of 500000 households, between 2005 and 2007.  Male: 49.6%. | | 1y | | | 2841/2988 infants  (reflux data at 3 months n=2782, reflux data at 12 months n=1771) | Mailed questionnaires at one per month until the infant was  7 months old and then twice about every 7 weeks until month  12. | Infants were categorized as having reflux at each month if mothers checked a box next to “Reflux” in response to the question asking, “Which of the following problems did your baby have during the past 2 weeks?”  Symptom frequency not further specified. | | * 2m: 9.2% * 3m: 10.1% * 4m: 8.9% * 5m: 7.7% * 6m: 6.6% * 7m: 5.4% * 9m: 4.9% * 10.5m: 3.8% * 12m: 1.6% | | Compared to direct breastfeeding:  Bottled human milk feeding:  RR = 1.26, 95% CI [0.40, 3.97]  Bottled human milk plus formula feeding:  RR = 2.19, 95% CI [1.11, 4.33]  Formula feeding:  RR = 1.95, 95% CI [1.39, 2.74]  Mixed breastfeeding:  RR = 1.08, 95% CI [0,73, 1.58]  Mixed breastfeeding plus formula feeding:  RR = 1.59, 95% CI [1.40, 2.42]  Addition of solid food:  RR = 1.21, 95% CI [0.86, 1.70]  Compared to female gender:  RR = 1.21, 95% CI [0.97 – 1.58] |
| **2015, Van Tilburg** | United States | | Cross-sectional study | | Children aged 0-18 years in all 50 states of the USA (sample of mothers who joined online panels to answer a variety of surveys). Data collection during first two weeks of June 2013  Age: 1.4 ± 1.2y  Male: 52.3% | 3w | | 264/320  \*85 < 1y | | Questionnare about gastrointestinal symptoms based on the Rome III infant and todler diagnostic criteria and QPGS-RIII for children and adolescents, filled out by the mothers | Regurgitation (Rome III criteria, in infants <1y only)  Spit up/vomit: | | 25.9%  ≤1/week: 18.2%  2-3/week: 6.3%  4-6x/week: 2.8%  1/day: 6.3%  2/day: 9.8%  3-10/day: 9.1% | | *Analysis not performed.* |
| **2010,**  **Van Howe** | United States | | Prospective cohort study | | Infants born and followed in Marquette General Hospital, a rural referral hospital. Motherinfant pairs followed over study period.  Age: 1m GA: 39.6±1wk Birth weight: 3536±460g | 8.5m | | 128 | | Gastroesophageal Reflux Questionnaire Revised (I-GERQR) at age 1m, 2m, 4m, 6m filled out by the mother | I-GERQR ≥16, symptoms assessed over the past week | | * 1m: 25.5% (24/94;   95% CI 16.7-34.4)   * 2m: 12.5% (12/96;   95% CI 5.9-19.1)   * 4m: 8.0% (8/100;   95% CI 3.7-13.3)   * 6m: 2.9% (3/103;   95% CI 0-6.2)  (no prevalence data on subdomains of I-GERQR provided) | | *Analysis not performed.* |
| **2009, Hegar** | Indonesia | | Prospective cohort study | | Infants born at the Private Public Hosital at Tangerang during June – August 2006.  Male: 52% (67) | 1y | | 130/163 | | Monthly or 2 monthly data collection by the mother for 1 week in a diary for respectively first 6 and last 6 months | Regurgitation or spilling: effortless return of gastric contents at least into the mouth, occurring at least daily over last week.  Occurring <1/day vs 1-4/day vs >4/day | | * 0-1m: 80.8% * 1-2m: 82.3% * 2-3m: 78.5% * 3-4m: 72.9% * 4-5m: 62.4% * 5-6m: 50.4% * 6-7m: 29.3% * 7-8m:30.1% * 8-9m: 25.5% * 9-10m: 22.7% * 10-11m: 17.3% * 11-12m: 12.7% * 12-13m: 7.2% * 0-1m: 7.7% vs 53.1% vs 20% * 1-2m: 9.3% vs 53.8% vs 19.2% * 2-3m: 6.3% vs 47.9% vs 33.3% * 3-4m: 15.0% vs 49.6% vs 12.0% * 4-5m: 40.0% vs 30.0% vs 20.0% * 5-6m: 36.7% vs 10.2% vs 40.8% * 6-7m: 11.1% vs 25.6% vs 2.6% * 7-8m: 8.0% vs 20.3% vs 0.9% * 8-9m: 4.6% vs 20.9% vs 0.0% * 9-10m: 4.5% vs 18.2% vs 0.0% * 10-11m: 1.8% vs 15.5% vs 0.0% * 11-12m: 4.5% vs 8.2% vs 0.0% * 12-13m: 3.6% vs 3.6% vs 0.0% | | *Exclusively vs. partially breastfed:*  78.9% vs 90.5%, p=0.479  \*78.6% vs 93.7%, p=0.010  \*73.2% vs 87.5%, p=0.000  \*57.4% vs 82.9%, p=0.030  \*47.2% vs 65.8%, p=0.018  \*47.1% vs 36.8%, p=0.017  (analysis not further performed due to introduction of solid feeding)  *(univariate analyses only, no multivariate anlayses performed)* |
| **2005, Iacono** | Italy | | Prospective cohort study | | In Italy, parents are required to choose a pediatrician after childbirth who monitors regular development of the child and provides primary care. 150 pediatricians distributed throughout Italy participated in the study and recorded the presence of gastro-intestinal symptoms in the first 20 infants registered to them during the study period.  Male: 51% (1457)  Age at entry: 10.1±2.2 days (7-13)  GA: 39.1±1.4 weeks (32-43) | 6m | | 2879/ 3000 | | Standard clinical chart and symptom record during clinical check-up or, in any case, during a set monthly visit | Regurgitation: loss of a small part of the meal, without retching. Present throughout study period. | | 23% (diagnosed at mean age of 32 ± 25 days) | | *No significant difference in prevalence in those infants formula or breast-fed. No raw data provided.*  Birthweight <2500g: 30.6% vs 22.9% p<0.001  GA < 36 weeks: p<0.005 (no raw data provided)  *(univariate analyses only, no multivariate anlayses performed)* |
| **2004, Hegar** | Indonesia | | Prospective cross-sectional study | | Healthy infants visiting outpatient clinic of Cipto Mangunkusumo Hospital, Jakarta, for routine immunization (all term-born).  Male: 54.3% (75)  0-3m: n=74  4-6m: n=34  7-9m: n=21  10-12m: n=9 | 2w | | 138 | | Prospective interviewing mothers using a standard questionnaire about prevalence of regurgitation during previous two weeks. | Regurgitation: once or more /day  Regurgitation <1/day vs 1-4/day vs >4/day | | * 1m: 90% * 2m: 88% * 3m: 71% * 4m: 40% * 5m: 79% * 6m: 40% * 7m: 40% * 8m: 67% * 9m: 0% * 10m: 20% * 11m: 0% * 12m: 33% * 1m: 10% vs55 % vs 25% * 2m: 8% vs 52% vs 28% * 3m: 6% vs 47% vs 18% * 4m: 10% vs 30% vs 0% * 5m: 15% vs 43% vs 21% * 6m: 10% vs 30% vs 0% * 7m: 20% vs 20% vs 0% * 8m: 67% vs 0% vs 0% * 9m: 0% vs0 % vs 0% * 10m: 0% vs 20% vs 0% * 11m: 0% vs 0% vs 0% * 12m: 33% vs 0% vs 0% | | *Analysis not performed.* |
| **2002, Osatakul** | Thailand | | Prospective cohort study | | Infants attending well-baby clinic of Songklanagarind hospital. Parent infant pairs followed over study period.  Age: 1m Male: 55.9% (81) | 1y | | 145 | | Interview parents, diary records  (1m, 2m, 4m, 6m, 8m, 10m, 12m) | Regurgitation ≥1 day/week  Regurgitation 1-3 day/week vs 4-6/week vs daily  Regurgitation 1-3 episodes/day vs 4-6/day vs >6/day | | * 1m: 79.3% (115;   95% CI 72.6-86.0)   * 2m: 86.9% (126;   95% CI 81.4-92.4)   * 4m: 69.7% (101;   95% CI 62.3-77.1)   * 6m: 45.5% (66;   95% CI 37.5-53.5)   * 8m: 22.8% (33;   95% CI 16.1-29.5)   * 10m: 12.4% (18;   95% CI 7.1-17.7)   * 12m: 7.6% (11;   95% CI 3.3-11.9)   * 1m: 39.3% vs 6.9% vs 33.1% * 2m: 43.4% vs 25.5% vs 17.9% * 4m: 48.2% vs 13.1% vs 8.3% * 6m: 39.3% vs 4.1% vs 2.1% * 8m: 17.2% vs 4.8% vs 0.7% * 10m: 12.4% vs 0% vs 0% * 12m: 7.6% vs 0% vs 0% * 1m: 68.0% vs 7.8% vs 3.6% * 2m: 81.0% vs 4.8% vs 1.5% * 4m: 65.4% vs 2.9% vs 1.4% * 6m: 44.0% vs 1.5% vs 0% * 8m: 22.8% vs 0% vs 0% * 10m: 12.4% vs 0% vs 0% * 12m: 7.6% vs 0% vs 0% | | *No significant difference in prevalence in those infants formula or breast-fed or receiving both feeding types. No sifnicant difference in prevalence based on amounts of solids taken. Univariate analysis only.* |
| **2002, Miazawa** | Japan | | Prospective cohort study | | Monthly healthy baby check-ups in Kasagke and Hara town and Tune city from August 2000 to 2001.  Male: 51.1%  1m: n=157  4m: n=458  7m: n=156  12m: n=150 |  | | 921 | | Symptom questionnaire distributed to mothers of infants and checked by one and the same pediatrician | Regurgitation: ≥1 episode/day (not further specified)  Regurgitation: ≥3 episode/day (not further specified) | | * 1m: 47.1% * 4m: 28.8% * 7m: 6.4% * 12m: 0.0% * 1m: 14.0% * 4m: 11.4% * 7m: 2.6% * 12m: 0.0% | | *No significant difference in prevalence in those infants formula or breast-fed. No raw data provided. Univariate analysis only.* |
| **1997, Nelson** | United States | | Prospective cross-sectional study | | Questionnaires were distributed to parents of healthy, term-born children ≤ 13 months in the Pediatric Practice Research Group of practices (n=19) in Chicago from June – August 1995  Age: 4.5 ±3.8 months  Male: 53% |  | | 948 | | Shortened and revised version of I-GERQ, ie IGER-SF | Regurgitation: ≥1 episode/day  Regurgitation: ≥4 episode/day | | * 0-3m:50% * 4m: 67% * 6m: 61% * 7m: 21% * 10-12m: 5% * 5m: 23% * 7m: 7%\*   \*no raw data provided for other age-groups | | *Analysis not performed.* |
| **1996, Orenstein** | United States | | Prospective cross-sectional study | | Consecutive infants attending well-baby clinic of Children’s Hospital Pittsburgh between January – November 1992  Age: 19 (3-60) weeks  Male: 48% | 1w | | 100 | | I-GERQR completed by a parent of each infant without assistence | Regurgitation: “how often does the baby spit up?”, >1/day vs >4/day vs >5/day, symptoms assessed over the past week | | 40% vs 15% vs 6% | | *Analysis not performed.* |
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| **Children (n=14 studies)** | | | | | | | | | | | | | | | |
| **2015, Okimoto** | | Japan | Cohort study | Children of employees of a tertiary referral hospital (Shimane University Hospital), and a related facility (Matsue Seikyo General Hospital)  Age, in analysis: 6-19y   * In total: male: 182/341 * 6-9y: 95; male: 48 * 10-19y: 246; male: 134 | | | 1w | | 341/1859 | Japanese version of GerdQ | GerdQ score ≥8 or any subject receiving treatment for GERD, answered by the children or with help of the parent | Overall: 4.4%  6-9y: 3.2%  10-19y: 4.9% | | | *No subanalysis performed for different pediatric age-ranges* |
| **2014, Chen** | | Taiwan | Population-based study | Students attending four public junior high schools in Hualien County  Age: 13-16y   * Male: 51.1% (893/1745)   BMI (mean±SD): 20.86±4.55 | | | 3m | | 1745 | Structured symptom questionnaire by students (if GQ1 and/or GQ2 positive, frequency of symptoms was obtained) | **GQ1:** “Had you have a burning feeling occurred at the upper stomach near the esophagus and this burning feeling was rising up to the chest, throat, or mouth?  **GQ2**: “Had you have a painful sensation in the esophagus behind the sternum when swallowing?”  **Cumulative prevalence:** positive for GQ1 and/or GQ2 coupling with GERD symptoms ≥1 time/week  **3-month prevalence:** GERD symptoms ≥1 time/week during the past 3 months | **20.5%**  **8.9%** | | | \*Male: 17.9% vs 23.2% (p=0.0059)  \*Male: 7.5% vs 10.5% (p=0.031)  *(all univariate analysis only, no multivariate anlaysis performed)* |
| **2013, Reshetnikov** | | Russia | Population-based cross-sectional study | Students attending four randomly selected secondary schools in Novosibirisk  Age: 14-17y  Male: 42.1% (189) | | | 1y | | 449 | Russian version of Bowel Disease Questionnaire completed by the children | **GER symptoms:\***  **Heartburn:** “burning pain or discomfort behind the breast bone in the chest”  **Acid regurgitation:** “bitter or sour-tasting fluid coming into the throat or mouth)  \*Symptom frequency (scale 1-6): none in the past year, <1 /month, 1 /month, 1 /week >1/week, daily. | **≥1 /month:** 22.0%  **≥1 /week:** 8.9%  **≥1 /week:** 6.7%  Once /month: 10.2%  Once /week: 4.2%  Few times /week: 1.6%  Daily: 0.9%  **≥1 /week:** 2.9%  Once /month: 5.6%  Once /week: 1.6%  Few times /week: 0.7%  Daily: 0.7% | | | **Male: 23.8% vs 20.8% (p=0.44)**  \*OR BMI > 23: 2.8 (1.2-6.3)  OR smoking: 1.6 (0.9- 2.8)  OR alcohol: 1.6 (1.0- 2.6)  **Male: 6.3% vs 10.8% (p=0.10)**  \***Male vs female, overall, p=0.007**  **Male vs female, overall, p=0.46**  *(univariate analyses only, no multivariate anlayses performed)* |
| **2012, Stordal** | | Norway | Population-based cross-sectional study | A convenience sample of 872 children with doctor-diagnosed asthma (age 10.4, male 65%) recruited from five Norwegian pediatric outpatient clinics. For this review only the control group was considered, which consisted of healhty children identified through the Central Population Registry or recruited from schools in the community.  Age: 10.8 y  Male: 48% | | | 1w | | 265 | GERD questionnaire (score 0-10), symptoms assessed over past week, score ≥3 considered positive | **Positive GERD score:**  Regurgitation: “did you regurgitate or throw up”  Acid regurgitation:  Heartburn/retrosternal pain: “did you have a burning or painful feeling in the middle of your chest?” | **8.5%**  5.3%  10%  3.1% | | |  |
| **2012, Quitadamo** | | Italy | Prospective cohort study | Consecutive children age 2-18 y scheduled for routine well-child visits at the Primary Care Center of the Department of Pediatrics, University Federico II, Naples from June – December 2009.  Age: mean 8.2 ± 4.2y | | | 2m | | 153 | Questionnaire of GERD symptoms over preceding 2 months, severity and frequency of symptoms were classified on a scale 0-3. Postieve reflux score defined as ≥ GERD symptom occurring at least weekly. | **Positive reflux score (symptoms ≥1 /week):**  Heartburn  Epigastric pain  Vomiting/regurgitation | **32%**  8.5%  21.6%  7.8% | | | Obese vs nonobese:  12.0% vs 6.6%, p =0.140  \*38.7% vs 15.6%, p=0.004  \*19.4% vs 4.0%, p=0.008  (*univariate analysis only)* |
| **2010, Gunasekaran** | | United States | Population-based cross-sectional study | Children attending 4 racialy and ethnically diverse high schools in suburban areas of Chicago  Age: mean age 15. ±1.3y (13-20y)  Male: 46.1% | | | 1y | | 2561 | ARQ questionnaire by students as according to Gunasekaran et al., 2008 | **Any esophageal symptoms:**  Heartburn:  Regurgitation | **≥1 /week: 18.8%**  ≥1 /week: 11.0%  ≥1 /week: 8.7% | | | Ethnicity: overall and on subdomains p=ns  (*univariate analysis only)* |
| **2009, Pashankar** | | United states | Prospective cohort study | A convenience sample of 251 obese children was recruited from the Obesity Clinic, Yale University. For this review only the control group was considered, which consisted of children attending immunizations, well-child visits, school screening examinations, or counseling in a primary care clinic and adolescent clinic in the New Haven area  Age: 7-16.9y Mean±SD: 12.3±3.2y Male: 46% (46/101) BMI (mean±SD): 20.0±3.8 | | | 1w | | 101/337 | Standardized “Reflux symptom score” questionnaire by children  (≥10y) or parents (<10y) | **Reflux symptom score**  **≥3, symptoms experienced over the last week**  Heartburn:  Regurgitation: | **2%**  3%  4% | | | BMI >95th percentile: 31%, p<0.01  BMI >95th percentile: 34%, p<0.01  BMI >95th percentile: 27%, p<0.05  *(\*compared to convenience sample, all univariate analysis only, no multivariate anlaysis performed)* |
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| **2008, Landau** | | Israel | Retrospective cohort study | All candidates for military service attending Children Israel Defense Forces Recruiting Office  Age: 17y  Male: 58.5% (273166) | | | 3m | | 466855 | Pre-examination comprehensive questionnaire, primary care physician chart review, GI-symptom specific interview, physical examination by general practitioner, final diagnosis by gastro-enterologist | GERD defined as: symptoms of heartburn or acid regurgitation, >3 times/week for ≥3 consecutive months | 0.18% (175.8/100000) | | Male: 0.18% vs 0.17%, p=ns  \*BMI: in both males and females higher BMI significantly associated with higher prevalence of GERD (p<0.05), no raw data provided.  *(all univariate analysis only, no multivariate anlaysis performed)* | |
| **2008, Gunasekaran** | | United States | Population-based cross-sectional study | Children atting 2 predominant Caucasian high schools in suburban areas of Chicago  Age: mean age 15.7±1.3y (14-20y)  Male: 56.8% | | | 1y | | 1343 | ARQ questionnaire by students | “How often do you experience the following symptoms:” (any of below)\*  **Heartburn**: “a burning sensation in the upper abdomen (stomach) or chest: this complaint may be worser after a large meal, exercise, lying down or bending over.  **Regurgitation**: “fluid or food regurgitating to the back of the throat or wet burps”  \* in the year prior to completion of the study, risk analysis based on symptoms occurring ≥ 1/month | **≥1 /month: 38.7%**  **≥1 /month: 22.4%**  Once /month: 13.4  Once /week: 5.1  Few times /week: 3.3  Daily: 0.7  **≥1 /month: 21.4%**  Once /month: 12.8  Once /week: 5.2  Few times /week: 2.6  Daily: 0.7 | | Male: 23.2% vs 21.4%, p=ns  Male: 23.2% vs 21.4%, p=ns  \*Smoking: 34.5% vs 20.6%, p <0.001  \*Alcohol: 33.2% vs 13.6%, p<0.001  NSAID: 25.6% vs 17.3%  Male: 20.4% vs 22.7%, p=ns  \*Smoking: 30.3% vs 20.1%,p=0.003  \*Alcohol: 26.1% vs 20.4%, p=0.057  NSAID: not reported  *(all univariate analysis only, no multivariate anlaysis performed)* | |
| **2007, Ehsani** | | Iran | Population-based cross-sectional study | Children sampled by stratified randomization: Tehran was divided into five regions (due to different SES), 3 randomized addresses per region were selected, these and consecutive households were interviewed until estimated number of casus was reached  Age: 0-19y ≤10y: 100  11-19y: 100  Male: 50% | | | 1y | | In analysis: 200/700 | Symptom questionnaire by cases  (not further specified) | Existence of heartburn and/or acid regurgitation | ≤10y: 16% 11-19y: 35%  (pooled prevalance: 25.5%) | | *Not performed* | |
| **2007, Murray** | | Northern Ireland | Population-based cross-sectional survey | Young Hearts 2000 study recruiting 500 individuals in 12-15 y old boys and girls from 36 randomly selected postprimary schools. A follow-up questionnaire was send by mail in 2001 to all YH2000 participants.  608 participants <15y (mean 14.1, SD 0.52), 525 ≥15y (mean 17.0, SD 0.71)  Male: 45.6% ( 517) | | | 3m | | 1133/2000 | Questionnaires regarding epigastric pain, heartburn and acid regurgitation, answered by adolescent and both parents | **Epigastric pain:** “How often in the last 3 months have you had pain or discomfort in the place shown in the picture?”  **Heartburn:**  “How often in the last 3 months have you had heartburn>”  **Acid regurgitation:**  “How often in the last 3 months have you got a very sour or acid tasting fluid in the back of your throat?” | **≥1 /week: 6.0%**  **≥1 /week: 3.2%**  **≥1 /week: 5.1%** | | Male: OR 1.32 (0.78-2.24)  \*Smoking: OR 3.31 (1.62-6.01)  Alcohol < 10: OR 0.99 (0.34-2.66)  Alcohol >10: OR 1.58 (0.67-3.58)  Overweight (BMI): OR 1.02 (0.49- 2.06)  Obesity (BMI): 1.16 (0.34-3.51)  Male: OR 0.68 (0.33-1.38)  \*Smoking: OR 2.94 (1.20-6.98)  Alcohol < 10: OR 0.40 (0.22-2.78)  \*Alcohol >10: OR 3.33 (1.35-7.99)  Overweight (BMI): OR 0.81 (0.27- 2.22)  Obesity (BMI): 0.50 (0.03-3.53)  Male: OR 0.64 (0.36-1.12)  \*Smoking: OR 2.38 (1.12-4.49)  Alcohol < 10: OR 1.56 (0.58-3.97)  \*Alcohol >10: OR 2.34 (1.02-5.21)  Overweight (BMI): OR 1.64 (0.82- 3.26)  Obesity (BMI): OR 2.00 (0.66-5.59)  *(*\**all univariate analysis only, none of the associations remained significant in multivariate analysis )* | |
| **2006, Debley** | | United States | Population-based cross-sectional study | Children attending 6 of 12 Seattle middle schools (demographically similar to 6 schools not participating)  Age: 13-14y  Male: 50.9% | | | 1m | | 2397/2797 | The International Study of Asthma and Allergies in Childhood (ISAAC)  questionnaire by students | 1 or 2 questions positive:    **Heartburn:** ‘‘In the past month have you had heartburn ≥1 time / week?’’  **Regurgitation:** ‘‘In the past month have you had episodes of regurgitation (food or fluid coming up from the stomach) causing burning in the throat and bad taste ≥1 time/week?’’  \*with symptoms occurring on a daily basis | 6.0%  (95% CI 5.4-6.6)  3.8%\*  4.0%\*  \*calculated manually from data provided | | Not analysed | |
| **2002, Martin** | | Australia | Prospective birth cohort | Mothers of infants born at the Queen Victoria Hospital, Adelaide, were approached from May 1987 – April 1988.  Mean age at 9y FU: 9.7±0.47y  Male at 9y FU: 54% (372) | | | 9y | | Infants:  836/1981 completed FU of 2 y  Children:  693/836 completed FU at 9 y | Daily symptom diaries during the first 2y (nurse contact every 3 months throughout study period) of life and reviewed at 9y of age. | Days of infant spilling in the first 2y (spilling as used equivalent for regurgitation and/or vomiting, i.e. where feeds or gastric contents are returned and are visible emanating from mouth either in large or small quantitiy) for most feeds (50% or more) on a daily basis.  Child respiratory health questionnaires asked of the parents, symptom recall <1y.  **Heartburn:** “burning sensation behind the breastbone”  **Acid regurgitation:** “sour or bitter taste in the mouth” | *Infant data portrayed descriptively only, no raw data provided. Original data could not be retrieved after contacting the author.*  Over past year: 4.5%  <1/monthly: 3.1%  <1/weekly: 1%  >1/weekly: 0.5%  Over past year: 3.8%  <1/monthly: 1.7%  <1/weekly: 1.2%  >1/weekly: 0.9% | | (no reported associations for gender, maternal smoking or mode of feeding; no raw data provided)  (no reported associations for gender; no raw data provided) | |
| **2000, Nelson** | | United States | Cross-sectional survey | Questionnaires were distributed to parents of healthy children aged 3-17 y in 16 practices in the Pediatric Practice Research Group  Parents of:  566 children 3-9y  (median age: 5.6, male: 51%)  584 children 10-17y  (median age 13.2, male: 50%  615 children 10-17y  (median age 13.6y, male: 48%;  526 child-parent pairs) | | | 1w | | 1181 | Childhood GER questionnaire based on adult survey instruments for parents of children aged 3-9y and 10-17 y and one for children aged 10-17 y. Symptoms assessed over the past week. | **Heartburn:** “burning/painful feeling in middle of chest”  **Epigastric pain:** “stomach achache above belly button”  **Regurgitation:** “sour taste or taste of throw up”  \*Figure cointains prevalance data grouped for age 3-9 and patient reported for age 10-17. | | 3-9y: 1.8%  10-17y: 3.5% vs 5.2%  (parent vs selfreport)  3-9 y: 7.2%  10-17 y: 3.0% vs 5.0%  (parent vs selfreport)  3-9 y: 2.3%  10-17 y: 1.4% vs 8.2%  (parent vs selfreport) | | \*Smoking: 25.0% vs 4.1%, p=0.01  \*Male: 3.1% vs 6.7%, p=0.04  no reported associations for gender, cigarette, alcohol or caffeine use; no raw data provided  *(all univariate analysis only, no multivariate anlaysis performed)* |
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ARQ = adolescent GER questionnaire; FU = follow-up; GER = gastroesophageal reflux; GERD = gastroesophageal reflux disease; I-GERQR = infant gastroesophageal reflux disease questionnaire revised; OR = odds ratio