National Folic Acid Program –
What you need to know

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The National Council on Folic Acid is managed by the Spina Bifida Association.
National Council on Folic Acid (NCFA)

• The mission of NCFA is to improve health by promoting the benefits and consumption of folic acid.

Spina Bifida Association (SBA)

• The mission of SBA is to promote the prevention of Spina Bifida and to enhance the lives of all affected.
National Council on Folic Acid (NCFA)

- Coalition of organizations
- Over 90 members from non-profit, government, national and local organizations
- All members have some part of their focus on promoting folic acid
SBA Network

- 46 Chapters serving over 125 communities across the US

- 165 Spina Bifida Clinics treating and caring for children and adults

- National Resource Center reaches 10,000 each year
Folic Acid 101 Outline

• Epidemiology of Spina Bifida and anencephaly (NTDs)

• Clinical trials to show efficacy/effectiveness of folic acid in preventing of NTDs

• Folic Acid PHS recommendations

• Impact of folic acid fortification and supplementation in reducing the prevalence of NTDs in U.S.

• Folic Acid Counseling resources
Neural Tube Defects (NTDs)

- Spina bifida and anencephaly
  - 3,000 yearly U.S. -- 250,000 worldwide
- Spina bifida is most frequently occurring permanently disabling birth defect
- Leading cause of infantile paralysis in U.S.
- $400 million/year spent on care of children born with NTD in U.S.
- Very strong evidence shows that consumption of folic acid prevents 50-70% of NTDs
### Folic Acid +/- Multivitamins NTD Studies, 1980-1999

<table>
<thead>
<tr>
<th>Studies</th>
<th>% reduction</th>
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<tbody>
<tr>
<td>'80-Smithells</td>
<td>86%</td>
</tr>
<tr>
<td>'81-S. Wales</td>
<td>59%</td>
</tr>
<tr>
<td>'88-Atlanta</td>
<td>60%</td>
</tr>
<tr>
<td>'89-W. Australia</td>
<td>70%</td>
</tr>
<tr>
<td>'89-CA/Illinois</td>
<td>7%</td>
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<tr>
<td>'89-Boston</td>
<td>65%</td>
</tr>
<tr>
<td>'90-Cuba</td>
<td>100%</td>
</tr>
<tr>
<td>'91-UK-MRC</td>
<td>71%</td>
</tr>
<tr>
<td>'92-Hungary</td>
<td>100%</td>
</tr>
<tr>
<td>'93-New England</td>
<td>60%</td>
</tr>
<tr>
<td>'95-California</td>
<td>52%</td>
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<tr>
<td>'99-P.R. China</td>
<td>80%</td>
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1992 U.S. PHS Folic Acid Recommendation

- 400 micrograms (0.4mg) folic acid daily for all women capable of becoming pregnant
- If a woman has already had a pregnancy affected by an NTD, 4000 micrograms (4.0mg) folic acid is recommended before her next pregnancy
- Increase consumption of folic acid/folate:
  - Improve dietary habits
  - Consume fortified foods
  - Take a daily folic acid supplement
**Improve dietary habits**

- Possible to obtain the recommended dosage of folic acid through foods, but it is difficult.
- Human body actually absorbs the synthetic form of folic acid better than the natural form of folic acid called “folate.”
Consume fortified foods

• In 1998, the Food and Drug Administration required the addition of folic acid to “enriched”
  – breads,
  – cereals,
  – flours,
  – pastas,
  – rice and
  – other grain products
in order to increase the amount of synthetic folic acid in the general population’s diet.
Consume fortified foods

- United States Economic (CEA & CBA) Evaluation of Folic Acid Fortification
  - In 1998 U.S. fortified wheat flour at 140 mcg/100g flour
  - Reduction in NTDs -- 26%
  - Cost of fortification $3 million per year
  - Direct cost averted $125 million per year
  - Total (D & I) costs averted $425 million per year

Consume fortified foods

Percent Serum Folate Values ≥ 20 ng/mL

Data for 2000 and 2001 added since publication Data for 2001 is from January through September, 2001. (12/4/01)
Consume fortified foods

• From 1999 through 2004 there was an 8% to 16% decline in the level of the vitamin folate in the blood of U.S. women of childbearing age
  (January 5, 2007 issue of the Centers for Disease Control and Prevention (CDC) Morbidity and Mortality Weekly Report)

• Folate consumption decrease in those women with the lowest folate status was disproportionately small. These results reinforce the need to maintain monitoring of the way fortification is implemented.
Take a daily folic acid supplement

• easiest way to be sure to get the recommended daily amount of folic acid is to take a multivitamin every day
  – as part of a healthy diet
Percent women taking vitamins with folic acid daily
All women age 18-45, 1995 - 2005

Percent

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</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>28%</td>
<td>32%</td>
<td>32%</td>
<td>34%</td>
<td>29%</td>
<td>33%</td>
<td>32%</td>
<td>40%</td>
<td>33%</td>
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SPINA BIFIDA ASSOCIATION
Folic Acid Counseling

Tip: Don’t assume someone else is counseling women on folic acid

Counseling Tutorial Resources:
Spina Bifida Association counseling tutorial, “ABCs of Folic Acid Counseling”

www.spinabifidaassociation.org
– Programs / Services > Prevention > ABCs of Folic Acid Counseling
– CEs (nursing and health education)

FolicAcid.net
• www.folicacid.net/
Folic Acid Counseling Resource

- Pretest
- Tutorial:
  - Section 1: Overview of Folic Acid and Spina Bifida
  - Section 2: Folic Acid Recommendations
  - Section 3: Steps in Folic Acid Counseling
  - Section 4: Folic Acid Counseling in the Real World
  - Section 5: Counseling Scenarios
Tutorial: Section 2: Folic Acid Recommendations

So what should I recommend to most patients?

*General Recommendation for All Women of Childbearing Age:*

- Take a daily dose of 400 micrograms (0.4 mg) of synthetic folic acid available in a vitamin or...
- Eat a serving of fortified breakfast cereal containing 100% of daily value for folic acid daily.

**Remember!**
A daily vitamin is the easiest way for a woman to ensure that she’s getting enough folic acid.

**Daily Folic Acid Dose:**
400 micrograms (mcg) = 0.4 milligram (mg)
Tutorial: Section 5: Counseling Scenarios

Now it’s time to put your counseling skills to work with some realistic counseling scenarios.

Case Study #1

Lola, a 25-year-old Asian-American graduate student, is receiving follow-up treatment in your student clinic for irritable bowel syndrome. She mentions that the doctor who diagnosed her told her—among other things—to take a daily multivitamin. Lola says, however, that she does not want to “overload” her body with vitamins, so she intends to take only the specific nutrients, e.g., vitamin B12. She is confused. You should:

a. Advise her to ask her doctor which specific nutrients she is deficient in.
b. Tell her to take only the vitamins she is deficient in.
c. Give her more counseling to take a multivitamin with folic acid and talk to a nutritionist about what vitamins to take based on her diet.
Tutorial: Section 5: Counseling Scenarios

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Case Study #1

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c. Give her more counseling to take a multivitamin with folic acid and talk to a nutritionist about what vitamins to take based on her diet.

You are correct!
A multivitamin is the easiest way for Lola to make sure that she heeds her doctor’s request and gets enough folic acid.
SBA’s ABCs of Folic Acid Counseling

- Reach: Over 700 professionals have taken tutorial
  - Hundreds take ABCs of Folic Acid Counseling each month
  - 66% of women report receiving folic acid counseling
    - Up slightly over last survey administration
Conclusions

• The economic benefit exceeds the costs of implementing food fortification efforts with folic acid.
• At the present time, there are no known adverse effects at current folic acid fortification levels.
• Sustained multi-level tactics of multivitamin use, food fortification and improving dietary habits
Conclusions

- Need focus on Hispanic outreach
- Sustainable awareness efforts through partnerships in the local community
- More provider resources to increase folic acid counseling
Spina Bifida Association: The Future is Here Now

• Reach top 50 markets in US

• Nationwide organization serving every community

• Everyone touched by Spina Bifida is touched by SBA

• Reaching out to the over 60 million women of child bearing age
For more information

• Website: www.spinabifidaassociation.org

• National Resource Center: 1-800-621-3141

• National Council on Folic Acid Website: www.folicacidinfo.org