The Importance of
Consuming Safe Animal-Source Foods

Animal-source foods (ASF; milk, meat, and eggs) contain nutrients commonly lacking in the diets of the poor and vulnerable, yet they are essential for cognitive and physical growth. Additional research and continued interventions across the value chain are needed to improve ASF safety and ensure the nutritional benefits from these foods.

<table>
<thead>
<tr>
<th>RISKS</th>
<th>FACTS</th>
<th>REDUCING THE RISK</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FOODBORNE DISEASE</strong></td>
<td>41% of the global population lives in the poorest areas of the world and suffers from...</td>
<td>INTERVENTIONS</td>
</tr>
<tr>
<td>is the result of consuming contaminated foods. Contamination can occur at any stage in the process from food production to consumption.</td>
<td>53% of all foodborne illnesses,</td>
<td>– Practice general food hygiene, handling, and processing.</td>
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<td>Example: Consuming raw milk contaminated with bacteria, such as <em>Salmonella</em> and <em>Campylobacter</em>, may cause illness.</td>
<td>75% of all foodborne illness-related deaths, and</td>
<td>– Cook and store foods at safe temperatures.</td>
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<td></td>
<td>72% of all foodborne-related disability-adjusted life years, with children under 5 at high risk.</td>
<td><strong>FUTURE RESEARCH</strong></td>
</tr>
<tr>
<td><strong>ENVIRONMENTAL ENTERIC DYSFUNCTION</strong></td>
<td>Factors cited to be associated with EED include:</td>
<td>– Conduct surveys on foodborne disease incidence in low-income countries.</td>
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<td>(EED) is gut inflammation and reduced absorptive capacity and function in the small intestine leading to reduced ability to absorb nutrients. The causal agent usually is pathogens ingested through hand-to-mouth contact and unhygienic diets.</td>
<td>Poor sanitation</td>
<td>– Evaluate the effects on malnutrition and stunting.</td>
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<td>Example: Children in households with backyard poultry may develop EED from touching and ingesting feces.</td>
<td>Low income</td>
<td>– Quantify the full societal impact and study the economic burden of foodborne diseases.</td>
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<td>Feco-oral transmission from animal feces</td>
<td><strong>INTERVENTIONS</strong></td>
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<tr>
<td><strong>MYCOTOXINS</strong></td>
<td>Recent research shows that, in children, EED can: increase the risk of infections, and reduce the efficacy of oral vaccines</td>
<td>– Keep household compounds clean of animal feces.</td>
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<td>are toxic chemicals produced by fungi, which can be present in feeds and pass to ASF through animal product consumption, particularly through milk and animal blood.</td>
<td>Factors <em>increasing</em> mycotoxins in feeds can include:</td>
<td>– Create clean play and infant feeding environments.</td>
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<td>Example: Dairy animals that consume aflatoxin B1 in feeds secrete aflatoxin M1 in milk. Ochratoxin A, another type of mycotoxin, accumulates in animal blood and pork.</td>
<td>Climate factors (e.g., temperature changes or drought)</td>
<td>– Keep poultry in enclosures to separate them from children.</td>
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**INTERVENTIONS**
- Conduct animal husbandry interventions to determine their effect on EED.
- Conduct surveys on foodborne disease incidence in low-income countries.
- Evaluate the effects on malnutrition and stunting.
- Quantify the full societal impact and study the economic burden of foodborne diseases.
- Keep household compounds clean of animal feces.
- Create clean play and infant feeding environments.
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**FUTURE RESEARCH**
- Investigate the relationship between enteric infections and malnutrition.
- Explore the contribution of livestock to the incidence of enteric infections in low-resource settings.
- Conduct animal husbandry interventions to determine their effect on EED.

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**INTERVENTIONS**
- Dry and store feeds in cool, dry, pest free conditions.
- Diversify diets to reduce mycotoxin concentration.
- Educate farmers on good agricultural practices.
- Develop mycotoxin sampling methods to screen for contamination prior to processing or consumption.
- Breed crops for increased disease and pest tolerance.

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