Supportive Caregiving & Children’s Nutritional Status

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Malnutrition deaths are a failure of recognition. Children slip towards death’s door without most noticing. Then, it is too late. If someone does notice, the chance of thriving is likely lost”

Peter Horton
Nutrition Interventions

Adolescence to Pregnancy
- Improved use of locally available foods
- Food fortification, including salt iodization
- Micronutrient supplementation and deworming
- Fortified food supplements for undernourished mothers
- Antenatal care, including HIV testing

Birth
- Early initiation of breastfeeding within one hour of delivery (including colostrum)
- Appropriate infant feeding practices for HIV-exposed infants, and antivirals (ARV)

0-5 Months
- Exclusive breastfeeding
- Appropriate infant feeding practices for HIV-exposed infants, and ARV
- Vitamin A supplementation in first eight weeks after delivery
- Multi-micronutrient supplementation
- Improved use of locally available foods, fortified foods, micronutrient supplementation/home fortification for undernourished women

6-23 Months
- Timely introduction of adequate, safe and appropriate complementary feeding
- Continued breastfeeding
- Appropriate infant feeding practices for HIV-exposed infants, and ARV
- Micronutrient supplementation, including vitamin A, multi-micronutrients; zinc treatment for diarrhoea; deworming
- Community-based management of severe acute malnutrition; management of moderate acute malnutrition
- Food fortification, including salt iodization
- Prevention and treatment of infectious disease; hand washing with soap and improved water and sanitation practices
- Improved use of locally available foods, fortified foods, micronutrient supplementation/home fortification for undernourished women, hand washing with soap

Note: Blue refers to interventions for women of reproductive age and mothers. Black refers to interventions for young children.


(UNICEF, 2013)
Nutritional intervention alone does not promote healthy development, or protect against nutritional deficits.

UNICEF 1999
What helps promote optimal child development?

- Supportive Caregiving
- Play
- Communication
- Nutrition
- Water, Sanitation, Hygiene
Supportive Caregiving Interventions

### Recommendations for Care for Child Development

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Recommendations</th>
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| Birth-1 week    | - Play: Provide ways for your baby to see, hear, move arms and legs freely, and touch you. Gently soothe, stroke, and hold your child. Skin to skin is good.  
- Communicate: Look into your baby's eyes and talk to your baby. When you are breastfeeding, it is a good time. Even a newborn baby sees your face and hears your voice. |
| 1 Week-6 Months | - Play: Provide ways for your child to see, hear, feel, move freely, and touch you. Slowly move colourful things for your child to see and reach for. Sample toys: shaker rattle, big ring on a string.  
- Communicate: Smile and laugh with your child. Talk to your child. Get a conversation going by copying your child's sounds or gestures. |
| 6-9 Months      | - Play: Give your child clean, safe household things to handle, bang, and drop. Sample toys: containers with lids, metal pot and spoon.  
- Communicate: Respond to your child's sounds and interests. Call the child's name, and see your child respond. |
| 9-12 Months     | - Play: Hide a child's favourite toy under a cloth or box. See if the child can find it. Play peek-a-boo.  
- Communicate: Tell your child the names of things and people. Show your child how to say things with hands, like “bye bye”. Sample toy: doll with face. |
| 12 Months-2 Years| - Play: Give your child things to stack up, and to put into containers and take out. Sample toys: Nesting and stacking objects, container and clothes clips.  
- Communicate: Ask your child simple questions. Respond to your child's attempts to talk. Show and talk about nature, pictures and things. |
| 2 Years +       | - Play: Help your child count, name and compare things. Make simple toys for your child. Sample toys: Objects of different colours and shapes to sort, stick or chalk board, puzzle.  
- Communicate: Encourage your child to talk and answer your child's questions. Teach your child stories, songs and games. Talk about pictures or books. Sample toy: book with pictures |

- Give your child affection and show your love  
- Be aware of your child's interests and respond to them  
- Praise your child for trying to learn new skills
Typical Design to Study Effects of Nutrition & Supportive Caregiving on Development in Stunted Children

- Non-stunted
- Supportive Caregiving Intervention
- Nutrition Supplementation
- Combined Interventions
- Control (Stunted)
Effects of Nutrition & Supportive Caregiving on Development in Stunted Children (Jamaica)

(Grantham-McGregor et al., 1991)
Effects of Nutrition & Supportive Caregiving on Cognitive Development (Pakistan)

(Yousafzai et al., 2013)
Effects of Nutrition & Supportive Caregiving on Adult Involvement in Activities with Children (Pakistan)

(Yousafzai et al., 2013)
Effects of Nutrition & Supportive Caregiving on Growth and Weight at Age 7 (Columbia)

(Herrera & Super, 1983)
Effect sizes of **nutrition** on cognitive development

Small effects of $d = 0.09$

(Aboud & Yousafzai, 2015)
Effect sizes of supportive caregiving on cognitive development

Medium effects of $d = 0.42$

(Aboud & Yousafzai, 2015)
Effect sizes of **supportive caregiving** on **language development**

Medium effects of $d = 0.47$

(Aboud & Yousafzai, 2015)
Combined nutrition + supportive caregiving interventions published since 2000:


Effect sizes of combined interventions on cognitive and language development

<table>
<thead>
<tr>
<th>Study</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aboud, F. E., &amp; Akhter, S. (2011)</td>
<td>17.7</td>
</tr>
<tr>
<td>Vazir, S. et al. (2013)</td>
<td>22.7</td>
</tr>
<tr>
<td>Yousafzai, A. K. et al., (2014)</td>
<td>33.9</td>
</tr>
<tr>
<td>Overall effect size</td>
<td>100</td>
</tr>
</tbody>
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Social interaction is essential for learning

Infants are very receptive to information presented in the context of social interaction. Embedding information -- such as language or action or presentation of objects -- in a social format radically enhances infants' learning.

Socially enriched interaction serves to "open a gate" to learning for infants. “Social Gating”

(Kuhl, 2007; Kuhl, Tsao, & Liu, 2003)
1. Experiences Build Brain Architecture
Caregiver responsiveness has a positive effect on brain development.

*Tamis-Le Monda et al., 2001*
Serve and Return:
Social interaction builds brains

Child “serves” by gesturing, babbling, or crying

Caregivers “return the serve” with eye contact, words, laughing, or a hug

(Center on the Developing Child, 2016)
Social interactions are compromised in the context of malnutrition

Effects of malnutrition:

- Increased fatigue
- Reduced activity levels

In children:

- Less positive affect
- More negative emotionality
- Greater fearfulness
- Less sociability
- Less attentiveness

(Huffman, Zehner, Harvey, & Martin, 2001; Baker-Henningham, Hamadani, Huda, & Grantham-McGregor, 2009; Walker et al., 2007)
Social interactions are compromised in the context of malnutrition

Malnutrition causes child to be more lethargic and withdrawn

Child less able to “serve” and get caregiver’s attention

Caregivers have less opportunity to “return” and may be less likely to feed, play, and communicate

Delays in brain development

Delays in overall development
Malnutrition compromises “serve and return” and disrupts the development of the child’s brain.

Addressing the nutritional needs of the family AND supporting “serve and return” is essential for children’s healthy development.
W.A.S.H
- Build/refurbish village water and sanitation infrastructure
- Promote village and family hygiene practices

Nutrition
- Treat micronutrient and nutritional needs
- Nutritional practices
- Parasite control

Health Care
- Basic preventive healthcare
- Health education
- Coordination of healthcare treatment

Child Development
- Support children's early development
- Enhance community child care resources
- Support preparation to learn

Programming Elements

400 Grams/VTL
Thank you

ด้วยใจ

Cảm ơn bạn

ด้วยใจดีอย่างยิ่ง

แสดงความยินดี