

Hypotheses Database Overview

Jai Evans

Center for Information Technology

NIH

Features

- Contains text and original files of all Hypothesis Proposals submitted to NCS
- Password Protected on Portal
- Full Text search
- Traces submitted Hypothesis proposals throughout the process
- Tracks reviews of Hypothesis proposals
- Tracks versions with validation and release
- Email messaging for questions and responses

List of Proposed Hypotheses

Hypothesis Overview - Microsoft Internet Explorer

Address: <https://remus.cit.nih.gov/hypotheses/>

THE NATIONAL CHILDREN'S STUDY

General Announcements | eRoom Portal | Central Calendar | Forms | Hypotheses | Questions | Responses | *Hypotheses Manager*

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Hypothesis Overview Page

Search Hypothesis: Search

Sort by: [Focus Area] [Working Group]

Core Hypotheses

Accession #	Focus Area
1	Undesirable outcomes of pregnancy: birth defects and preterm birth Chris Title is a very long one to test the wrap-around format of the returned items from the query that was placed to produce this title. [Details]
128	Undesirable outcomes of pregnancy: birth defects and preterm birth Core Hypothesis 1 : Among women without diabetes before pregnancy, impaired glucose metabolism during pregnancy is proportional to risk of major congenital malformations of the heart, central nervous system, musculoskeletal system, and all birth defects combined. [Details]
129	Undesirable outcomes of pregnancy: birth defects and preterm birth Core Hypothesis 2 : Intrauterine exposure to mediators of inflammation due to infection of either vaginal, cervical, or uterine sites, or of more distal sites (e.g., periodontal disease) is associated with an increased risk of preterm birth. [Details]
	Undesirable outcomes of pregnancy: birth defects and preterm birth

Submitted Hypotheses

Accession #	Hypothesis Title
76	Asthma Hypothesis #1 Initial Proposal for Core Hypothesis/Question Proposed Core Hypothesis/Question: Asthma and wheezing illness in childhood - the role of environment and genetics in determining risk [Details]
79	Asthma Hypothesis # 4 -Gene Environment Asthma Mar 27, 2002 The Role of Prenatal Maternal Stress, Genetics and Biotransformation in Childhood Asthma. [Details]
38	Birth Defects 3.2 Pathways to specific child health and development outcomes are directly influenced, mediated, and/or moderated by family resources and processes. [Details]
34	Birth Defects Hypothesis #2 Glucose metabolism.doc4.doc July 24, 2002 [Details]
35	Birth Defects Hypothesis #3 Birth defects by alcohol July 24, 2002 [Details]
36	Community Outreach and Communications Hypothesis #1 Community Outreach Proposal July 24, 2002

Detail Page

Hypothesis Details - Microsoft Internet Explorer
Address: https://remus.ct.nih.gov/hypotheses/PublicHypoDetail.aspx?HypothesisID=76

THE NATIONAL CENTER FOR CHILDREN'S STUDY
General Announcements eRoom Portal Central Calendar Forms Hypotheses Questions Responses

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Hypothesis Detail Page
Return to Hypothesis Overview Page

Search Hypothesis: Search

Hypothesis ID: 76
Revision #: 1

Hypothesis Title: Hypothesis #1 Initial Proposal for Core Hypothesis/Question Proposed Core Hypothesis/Question: Asthma and wheezing illness in childhood - the role of environment and genetics in determining risk

Contact(s): London, Stephanie
Martinez, Fernando

Working Group: Asthma

Merged Hypotheses
This hypothesis is not derived by other hypotheses.
This hypothesis contains no merges.

Revision #	Attached Documents
1	Hypothesis -1.pdf

Initial Proposal for Core Hypothesis/Question
Proposed Core Hypothesis/Question: Asthma and wheezing illness in childhood - the role of environment and genetics in determining risk.
Workgroup: Asthma
Contact Person for Proposed Core Hypothesis/Question:
Dr. Fernando Martinez, University of Arizona, (520) 626-6387 (Fernando@respci.arizona.edu)
Dr. Stephanie London, NIEHS, (919) 541-5772 (london2@niehs.nih.gov)

Hypothesis Details - Microsoft Internet Explorer
Address: https://remus.ct.nih.gov/hypotheses/PublicHypoDetail.aspx?HypothesisID=76

Dr. Fernando Martinez, University of Arizona, (520) 626-6387 (Fernando@respci.arizona.edu)
Dr. Stephanie London, NIEHS, (919) 541-5772 (london2@niehs.nih.gov)

I. Justification for a Large, Prospective, Longitudinal Study

What is referred to as "asthma" in childhood is really three illnesses: airway obstruction which begins in the first two years of life but does not persist to school age (early onset transient airway obstruction), early onset airway obstruction that persists past school age (early onset persistent asthma) and recurrent airway obstruction that begins after the first few years of life (late onset asthma) (Martinez and Helms 1998). These three entities appear to have different etiologic factors. For example, respiratory infections with respiratory syncytial virus (RSV) and the immune response to RSV are important in the etiology of early onset airway obstruction but probably not in late onset asthma. In addition, family history of asthma and allergy appears to be most strongly related to early onset persistent asthma (London 2001). Children with early onset persistent asthma are more likely to be atopic or have a tendency to respond to common antigens in the environment (Martinez 2002). Patients with late onset asthma are also likely to have positive skin tests to aeroallergens (Martinez 1995). Few studies have examined asthma risk according to these three phenotypes. Prospective data are needed to examine risk factors for the development of these three phenotypes and examine risk factors for persistence of airway obstruction into later childhood and adulthood.

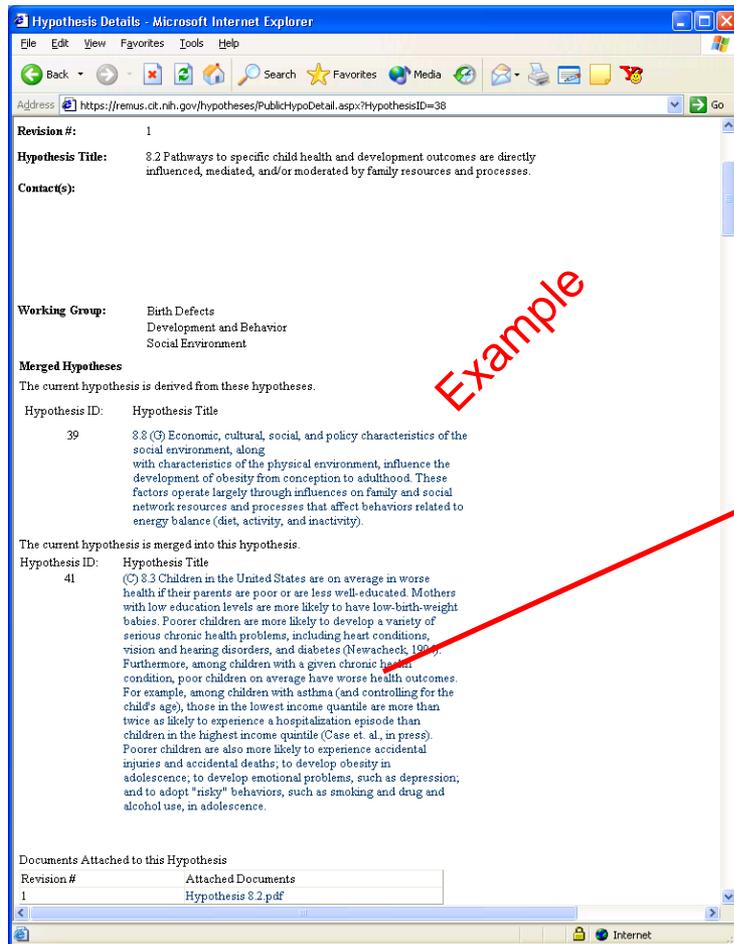
The more severe forms of asthma account for a disproportionate amount of the total asthma health care costs: one study estimated that less than 20% of persons with asthma account for more than 80% of the direct costs (Weiss 2001). Identification of children at risk for developing the severe forms of asthma would have clear public health impact. A large prospective study is needed to have sufficient numbers to identify risk factors to determine which children with asthma develop the severe, persistent variety.

Family data has clearly identified an important genetic component to asthma. While the specific genes are not yet known, this is an active area of investigation and there are a large number of plausible candidate genes. For each of these asthma phenotypes, interactions between genetic and environmental factors need to be explored. Asthma genes likely work in interaction with environmental factors but Hypothesis #1, Page 1 of 19

there is little work on gene-environment interaction in asthma. For example, data from human exposure studies indicates that individual susceptibility is important in the respiratory response to air pollutants, including ozone (Mudway 2000) and endotoxin (Arbour 2000). Genes involved in response to endotoxin have been identified in humans (Arbour 2000) and work in mice has identified linkage regions important in response to ozone (Kleeberger 1997) and particulate air pollution (Wesselkamper 2001). In addition, the genetic component of susceptibility likely involves interactions between multiple genes.

Pulmonary response to ozone, a strong oxidant, may also be determined by dietary antioxidant intake (Romieu, Meneses et al. 1998; Samet, Hatch et al. 2001). Another determinant of ozone susceptibility may be low birthweight or premature birth (Mortimer, Tager et al. 2000) and obesity later in childhood. Thus, with respect to ozone, three way interactions involving genetics and either diet or perinatal factors need to be considered. Similar considerations follow for other pollutant exposures. There are few studies examining the interactions between genetic factors and

Tracing Through Merges



Hypothesis Details - Microsoft Internet Explorer
Address: <https://remus.ck.nh.gov/hypotheses/PublicHypoDetail.aspx?HypothesisID=38>

Revision #: 1

Hypothesis Title: 8.2 Pathways to specific child health and development outcomes are directly influenced, mediated, and/or moderated by family resources and processes.

Contact(s):

Working Group: Birth Defects
Development and Behavior
Social Environment

Merged Hypotheses
The current hypothesis is derived from these hypotheses.

Hypothesis ID:	Hypothesis Title
39	8.8 (3) Economic, cultural, social, and policy characteristics of the social environment, along with characteristics of the physical environment, influence the development of obesity from conception to adulthood. These factors operate largely through influences on family and social network resources and processes that affect behaviors related to energy balance (diet, activity, and inactivity).

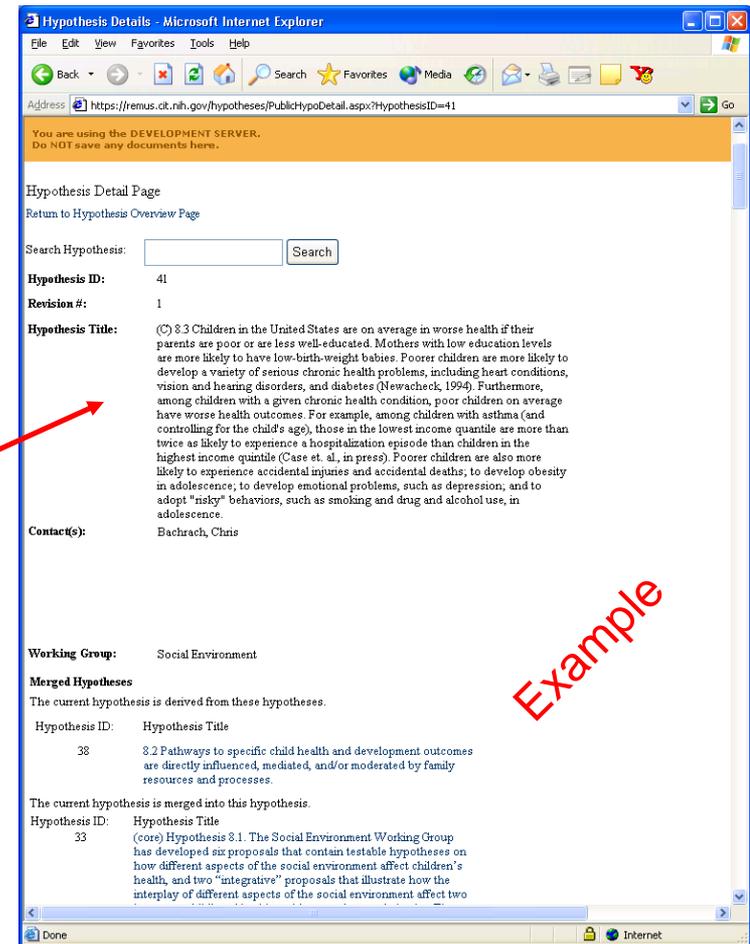
The current hypothesis is merged into this hypothesis.

Hypothesis ID:	Hypothesis Title
41	(C) 8.3 Children in the United States are on average in worse health if their parents are poor or are less well-educated. Mothers with low education levels are more likely to have low-birth-weight babies. Poorer children are more likely to develop a variety of serious chronic health problems, including heart conditions, vision and hearing disorders, and diabetes (Newacheck, 1994). Furthermore, among children with a given chronic health condition, poor children on average have worse health outcomes. For example, among children with asthma (and controlling for the child's age), those in the lowest income quintile are more than twice as likely to experience a hospitalization episode than children in the highest income quintile (Case et al., in press). Poorer children are also more likely to experience accidental injuries and accidental deaths, to develop obesity in adolescence, to develop emotional problems, such as depression, and to adopt "risky" behaviors, such as smoking and drug and alcohol use, in adolescence.

Documents Attached to this Hypothesis

Revision #	Attached Documents
1	Hypothesis 8.2.pdf

Example



Hypothesis Details - Microsoft Internet Explorer
Address: <https://remus.ck.nh.gov/hypotheses/PublicHypoDetail.aspx?HypothesisID=41>

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Hypothesis Detail Page
Return to Hypothesis Overview Page

Search Hypothesis:

Hypothesis ID: 41

Revision #: 1

Hypothesis Title: (C) 8.3 Children in the United States are on average in worse health if their parents are poor or are less well-educated. Mothers with low education levels are more likely to have low-birth-weight babies. Poorer children are more likely to develop a variety of serious chronic health problems, including heart conditions, vision and hearing disorders, and diabetes (Newacheck, 1994). Furthermore, among children with a given chronic health condition, poor children on average have worse health outcomes. For example, among children with asthma (and controlling for the child's age), those in the lowest income quintile are more than twice as likely to experience a hospitalization episode than children in the highest income quintile (Case et al., in press). Poorer children are also more likely to experience accidental injuries and accidental deaths, to develop obesity in adolescence, to develop emotional problems, such as depression, and to adopt "risky" behaviors, such as smoking and drug and alcohol use, in adolescence.

Contact(s): Bachrach, Chris

Working Group: Social Environment

Merged Hypotheses
The current hypothesis is derived from these hypotheses.

Hypothesis ID:	Hypothesis Title
38	8.2 Pathways to specific child health and development outcomes are directly influenced, mediated, and/or moderated by family resources and processes.

The current hypothesis is merged into this hypothesis.

Hypothesis ID:	Hypothesis Title
33	(core) Hypothesis 8.1. The Social Environment Working Group has developed six proposals that contain testable hypotheses on how different aspects of the social environment affect children's health, and two "integrative" proposals that illustrate how the interplay of different aspects of the social environment affect two

Example

Question to Working Groups

Hypothesis Question - Microsoft Internet Explorer

Address: <https://remus.ct.nh.gov/Hypotheses/HypoQuestion.aspx>

THE NATIONAL CHILDREN'S STUDY

General Announcements | eRoom Portal | Central Calendar | Forms | Hypotheses | Questions | Responses | Hypotheses

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Hypothesis Question Form

Hypothesis : 65 ICA Hypothesis 10 Childhood injuries and maltreatment

Working Group Chair/Co-Chair :

- Asthma
- Birth Defects
- Community Outreach and Communications
- Development and Behavior
- Early Origins of Adult Health
- Risks

Advisory Committee Members :

- All Members
- Bellinger David
- Burton Linda
- Doswell Willa
- Dudley Donald
- ...

Question Text :

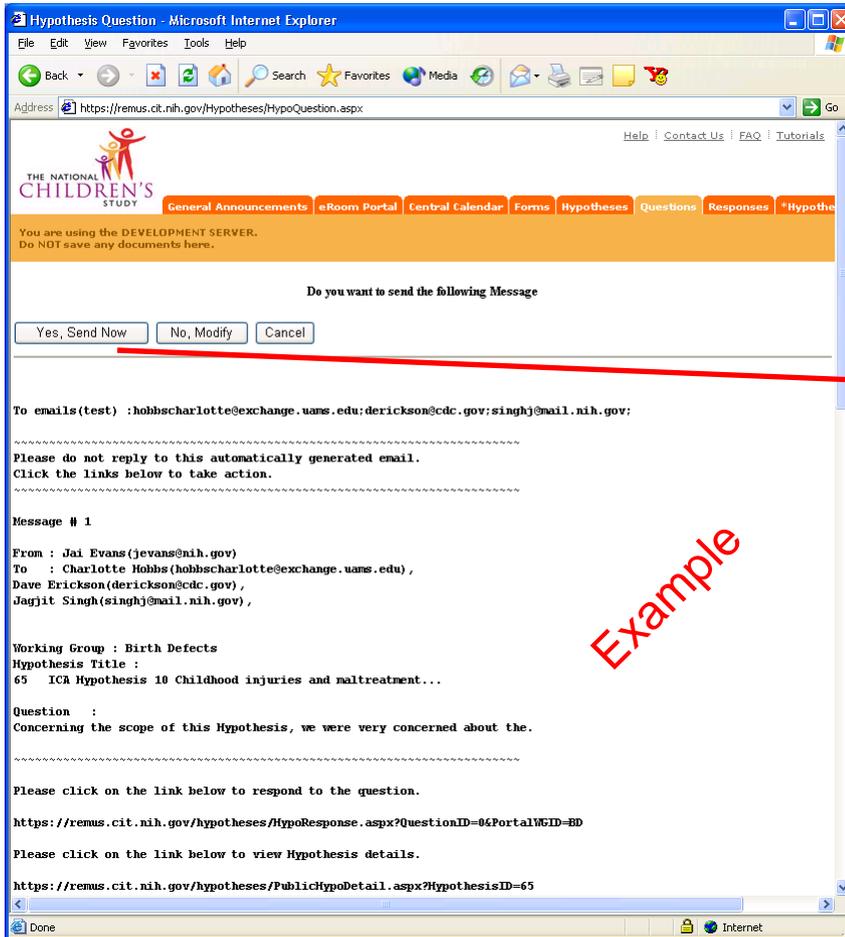
Concerning the scope of this Hypothesis, we were very concerned about the.

Due Date for the response : 01/12/2003

Submit Cancel

Example

Validation and Send



Hypothesis Question - Microsoft Internet Explorer

Address <https://remus.cit.nih.gov/Hypotheses/HypoQuestion.aspx>

THE NATIONAL CHILDREN'S STUDY

General Announcements | eRoom Portal | Central Calendar | Forms | Hypotheses | Questions | Responses | *Hypotheses

You are using the DEVELOPMENT SERVER.
Do NOT save any documents here.

Do you want to send the following Message

To emails(test) :hobbscharlotte@exchange.uams.edu;derickson@cdc.gov;singhj@mail.nih.gov;

~~~~~  
Please do not reply to this automatically generated email.  
Click the links below to take action.  
~~~~~

Message # 1

From : Jai Evans(jevans@nih.gov)
To : Charlotte Hobbs(hobbscharlotte@exchange.uams.edu) ,
Dave Erickson(derickson@cdc.gov) ,
Jagjit Singh(singhj@mail.nih.gov) ,

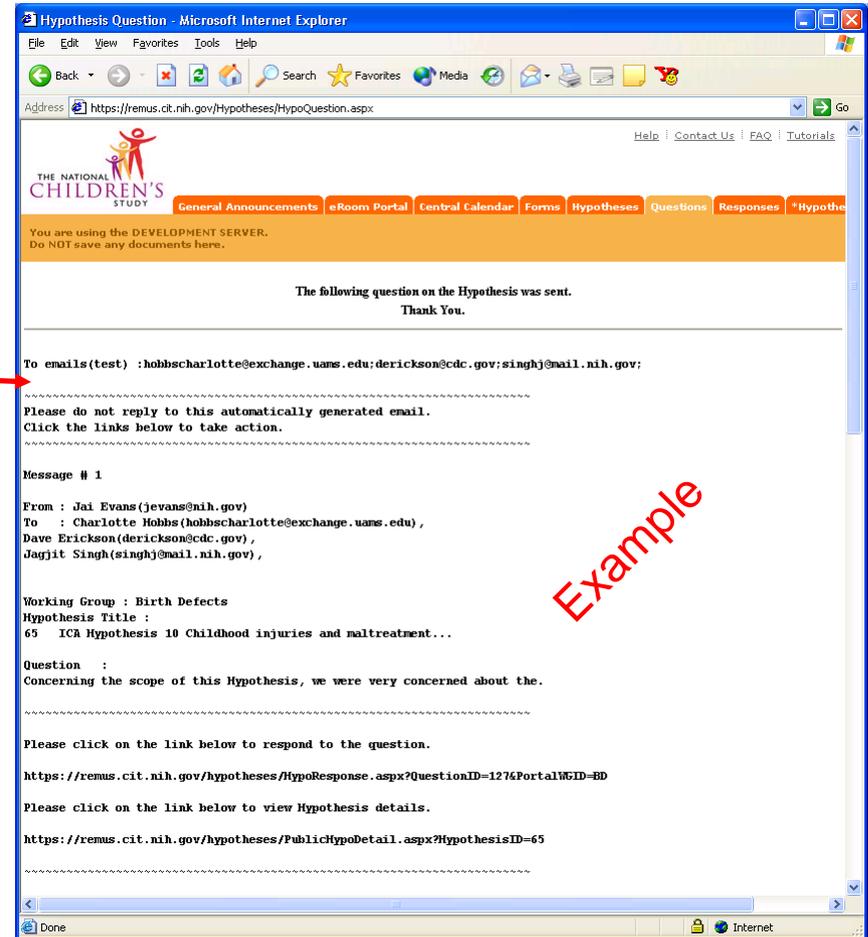
Working Group : Birth Defects
Hypothesis Title :
65 ICA Hypothesis 10 Childhood injuries and maltreatment...

Question :
Concerning the scope of this Hypothesis, we were very concerned about the.

~~~~~  
Please click on the link below to respond to the question.  
<https://remus.cit.nih.gov/hypotheses/HypoResponse.aspx?QuestionID=04PortalWEID=BD>

Please click on the link below to view Hypothesis details.  
<https://remus.cit.nih.gov/hypotheses/PublicHypoDetail.aspx?HypothesisID=65>

Example



Hypothesis Question - Microsoft Internet Explorer

Address <https://remus.cit.nih.gov/Hypotheses/HypoQuestion.aspx>

THE NATIONAL CHILDREN'S STUDY

General Announcements | eRoom Portal | Central Calendar | Forms | Hypotheses | Questions | Responses | \*Hypotheses

You are using the DEVELOPMENT SERVER.  
Do NOT save any documents here.

The following question on the Hypothesis was sent.  
Thank You.

To emails(test) :hobbscharlotte@exchange.uams.edu;derickson@cdc.gov;singhj@mail.nih.gov;

~~~~~  
Please do not reply to this automatically generated email.
Click the links below to take action.
~~~~~

Message # 1

From : Jai Evans(jevans@nih.gov)  
To : Charlotte Hobbs(hobbscharlotte@exchange.uams.edu) ,  
Dave Erickson(derickson@cdc.gov) ,  
Jagjit Singh(singhj@mail.nih.gov) ,

Working Group : Birth Defects  
Hypothesis Title :  
65 ICA Hypothesis 10 Childhood injuries and maltreatment...

Question :  
Concerning the scope of this Hypothesis, we were very concerned about the.

~~~~~  
Please click on the link below to respond to the question.
<https://remus.cit.nih.gov/hypotheses/HypoResponse.aspx?QuestionID=1276PortalWEID=BD>

Please click on the link below to view Hypothesis details.
<https://remus.cit.nih.gov/hypotheses/PublicHypoDetail.aspx?HypothesisID=65>

Example

Email received by Working Groups

```
question2.txt - Notepad
File Edit Format View Help

-----
Please do not reply to this automatically generated email.
Click the links below to take action.
-----

>From : Jai Evans(jevans@nih.gov)
To : Charlotte Hobbs(hobbscharlotte@exchange.uams.edu),
Dave Erickson(darickson@cdc.gov),
Jagjit Singh(j@mai1.nih.gov),

Working Group : Birth Defects
Hypothesis Title :
65 ICA Hypothesis 10 childhood injuries and maltreatment...

Question :
Concerning the scope of this Hypothesis we were very concerned about the...
Please respond by 01/12/2003]

-----
Please click on the link below to respond to the question.
https://remus.cit.nih.gov/hypotheses/HypoResponse.aspx?QuestionID=129&PortalWGID=BD
Please click on the link below to view Hypothesis details.
https://remus.cit.nih.gov/hypotheses/PublicHypodetail.aspx?HypothesisID=65
-----

Instructions :

You have received this message because you are a chair, cochair or advisor
to the National Children's Study for one of its working groups. We need
some information on the cited hypothesis. By responding to this email via
the links provided you help facilitate the coordination of the NCS.

When you click on the link you will be asked to log onto the NCS portal web
site. This is necessary to ensure security and coordination of responses.
You will then be presented with a web form to present your response. Your
response will be coordinated with other responses and recorded in our database.

If you need a new password or have problems logging in, please email :
<mailto:ncshelp@mail.nih.gov>ncshelp@mail.nih.gov. Replying to this email
by other means is not supported.

Thank you for your participation.
The(NCS)
```

```
question1.txt - Notepad
File Edit Format View Help

-----
Please do not reply to this automatically generated email.
Click the links below to take action.
-----

>From : Jai Evans(jevans@nih.gov)
To : Jay Giedd(jg@nih.gov),
Peter Scheidt(scheidtp@mail.nih.gov),
Robert Bradley(rhbradley@ualr.edu),

Working Group : Development and Behavior
Hypothesis Title :
65 ICA Hypothesis 10 childhood injuries and maltreatment...

Question :
Concerning the scope of this Hypothesis we were very concerned about the...
Please respond by 01/12/2003

-----
Please click on the link below to respond to the question.
https://remus.cit.nih.gov/hypotheses/HypoResponse.aspx?QuestionID=129&PortalWGID=BD
Please click on the link below to view Hypothesis details.
https://remus.cit.nih.gov/hypotheses/PublicHypodetail.aspx?HypothesisID=65
-----

Instructions :

You have received this message because you are a chair, cochair or advisor
to the National Children's Study for one of its working groups. We need
some information on the cited hypothesis. By responding to this email via
the links provided you help facilitate the coordination of the NCS.

When you click on the link you will be asked to log onto the NCS portal web
site. This is necessary to ensure security and coordination of responses.
You will then be presented with a web form to present your response. Your
response will be coordinated with other responses and recorded in our database.

If you need a new password or have problems logging in, please email :
<mailto:ncshelp@mail.nih.gov>ncshelp@mail.nih.gov. Replying to this email
by other means is not supported.

Thank you for your participation.
The(NCS)
```

Example

Example

Response from Working Groups

Hypothesis Response - Opera

File Edit View Navigation Bookmarks Mail Window Help

The internet marketing Learn How to Skyrocket your Online Sales by 837% Click Here

+Black... Opera Hypothe... Opera C... Super search OperaMail Find in page Amazon.cor Contracti...

The National Children'... Directory and Email Fo... Hypothesis Response Hypothesis Response

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THE NATIONAL CHILDREN'S STUDY

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Hypothesis Response Form

Response from Working Group : Development and Behavior

Hypothesis # : 65

[View Hypothesis Detail](#)

Question : Concerning the scope of this Hypothesis, we were very concerned about the.

Do You want to respond to this question? Yes No

Answer Text :

Great observation, we will discuss this in our meeting on the 3rd and respond to you.

Submit

Hypothesis Response - Opera

File Edit View Navigation Bookmarks Mail Window Help

The internet marketing Learn How to Skyrocket your Online Sales by 837% Click Here

+Black... Opera Hypothe... Opera C... Super search OperaMail Find in page Amazon.cor Contracti...

The National Children'... Directory and Email Fo... Hypothesis Response Hypothesis Response

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THE NATIONAL CHILDREN'S STUDY

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Do you want to send the following Message

Yes, Send Now No, Modify Cancel

~~~~~

Please do not reply to this automatically generated email. Click the links below to take action.

~~~~~

From : Jai Evans (jevans@nih.gov)
Working Group : Development and Behavior

Response Date : 12/10/2003

Question : Concerning the scope of this Hypothesis, we were very concerned about the.

Response : Great observation, we will discuss this in our meeting on the 3rd and respond to you.

~~~~~

# Responses Received by Questioner

```
response.txt - Notepad
File Edit Format View Help
Subject: Response to question Hypothesis # : 65

-----
Please do not reply to this automatically generated email.
Click the links below to take action.
-----

>From : Jay Giedd(jg@nih.gov)
working Group : Development and Behavior

Response Date : 12/10/2003

Question :
Concerning the scope of this Hypothesis, we were very concerned about the...

Response :
Great observation, we will discuss this in our meeting on the 3rd and respond to
you.

-----

Please click on the link below to see all responses and make conclusion to this
question.

https://remus.cit.nih.gov/hypotheses/HypoConclusion.aspx?QuestionID=129

Please click on the link below for another question.

https://remus.cit.nih.gov/hypotheses/HypoQuestion.aspx
```

Example

```
response2.txt - Notepad
File Edit Format View Help
Subject: Response to question Hypothesis # : 65

-----
Please do not reply to this automatically generated email.
Click the links below to take action.
-----

>From : Charlotte Hobbs(hobbscharlotte@exchange.uams.edu),
working Group : Birth Defects

Response Date : 12/11/2003

Question :
Concerning the scope of this Hypothesis, we were very concerned about the...

Response :
well we are happy with the hypothesis and find no compromise possible...

-----

Please click on the link below to see all responses and make conclusion to this
question.

https://remus.cit.nih.gov/hypotheses/HypoConclusion.aspx?QuestionID=129

Please click on the link below for another question.

https://remus.cit.nih.gov/hypotheses/HypoQuestion.aspx
```

Example

# Conclusion Rollup

The screenshot shows the HypoConclusion web application in an Opera browser window. The browser's address bar displays the URL <https://remus.ct.nih.gov/hypotheses/HypoConclusion.aspx>. The page content includes:

- Conclusion Action**
- Hypothesis # : 65**
- [View Hypothesis Detail](#)
- Working Group(s) Questioned :**  
Birth Defects , Development and Behavior ,
- Question :** Concerning the scope of this Hypothesis we were very concerned about the...
- Responses : (Click to view details)**
  - 57 12/11/2003 Birth Defects Well we are happy with th
  - 56 12/11/2003 Development and Behavior Great observation, we wil
- Detailed Response :**
- Action Taken :**
  - Pending
  - Forward to AC.
  - Sent back to WG.
  - Filed as is.
- Comments :**

A large red watermark reading "Example" is overlaid on the bottom right portion of the browser window.

# Reviews

**Edit Hypothesis - Microsoft Internet Explorer**

Address: <https://remus.ct.nh.gov/hypotheses/HypoEditor.aspx?HypothesisID=76>

Please enter review information for this hypothesis

Hypothesis (add/edit) General Information  
HypothesisID :76      Revision # :1

**Hypothesis Reviews**

17 04/10/2001 Federal Advisory Committee  
18 04/10/2001 Federal Advisory Committee

Please enter review information for this Hypothesis :

Date Reviewed : 12/16/2004

Working Groups : Federal Advisory Committee

Reviewers :

- Lutzker, John
- Lynch, John
- Lyon-Daniel, Katherine
- MacIntosh, David
- Macy, John
- Marcus, Stephen
- Mare, Robert

Ranking : Is Core

Importance to NCS : 2

Action Required : Returned to W/G

Comments :

Agree that this core, but of less importance.

Recommendations :

Done      Internet

# Editing Hypotheses

Microsoft Internet Explorer

Address: https://remus.cit.nih.gov/hypotheses/HypoEditor.aspx?HypothesisID=76

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Hypothesis Title | Hypothesis HTML | Public Health Significance | Justification | Scientific Merit | Potential Innovative Research | Feasibility | Merges | Reviews | File Archive | Validate & Release

Hypothesis (add/edit) General Information

HypothesisID: 76      Revision #: 1

Hypothesis Title:

Hypothesis #1 Initial Proposal for Core Hypothesis\Question  
Proposed Core Hypothesis\Question: Asthma and wheezing illness in childhood - the role of environment and genetics in determining risk

Working Groups:

- Asthma
- Birth Defects
- Community Outreach and Communications
- Development and Behavior
- Early Origins of Adult Health
- Ethics

Internet

# Future

- The system is extensible, so as new requirements emerge these can be added
- Currently Reviews are not presented to at-large members
- Allow at large members to pose questions
- Update backlog of review information into system
- Release work flow to Public site