

## Summary Table Evidence of Housing Intervention Effectiveness on Health

	<b>Sufficient Evidence</b>	<b>Needs More Field Evaluation</b>	<b>Needs Formative Research</b>	<b>No Evidence or Ineffective</b>
<b>Interior Biological Agents (Toxins)</b>	<ul style="list-style-type: none"> <li>• Multi-faceted tailored asthma interventions</li> <li>• Integrated Pest Management (allergen reduction)</li> <li>• Moisture intrusion elimination</li> </ul>	<ul style="list-style-type: none"> <li>• Dehumidification</li> <li>• General &amp; local exhaust ventilation (kitchens &amp; baths)</li> <li>• Air cleaners (to reduce asthma)</li> <li>• Dry steam cleaning</li> <li>• Vacuuming</li> </ul>	<ul style="list-style-type: none"> <li>• Carpet treatments</li> <li>• Education only</li> <li>• One-time professional cleaning</li> <li>• Acaracides</li> </ul>	<ul style="list-style-type: none"> <li>• Bedding encasement alone</li> <li>• Sheet washing alone</li> <li>• Upholstery cleaning alone</li> <li>• Air cleaners releasing ozone</li> </ul>
<b>Interior Chemical Agents (Toxics)</b>	<ul style="list-style-type: none"> <li>• Radon air mitigation through active subslab depressurization</li> <li>• Integrated Pest Management (pesticide reduction)</li> <li>• Smoking bans</li> <li>• Lead hazard control</li> </ul>	<ul style="list-style-type: none"> <li>• Radon mitigation in drinking water</li> <li>• Portable HEPA air cleaners to reduce particulate</li> <li>• Attached garage sealing to limit VOC intrusion</li> <li>• Particulate control by envelope sealing</li> </ul>	<ul style="list-style-type: none"> <li>• Radon air mitigation using passive systems</li> <li>• Occupant compliance with residential smoking bans</li> <li>• Improved residential ventilation</li> <li>• VOC avoidance</li> </ul>	<ul style="list-style-type: none"> <li>• Portable HEPA air cleaners to reduce environmental tobacco smoke</li> <li>• Air cleaners using or releasing ozone</li> </ul>
<b>External Exposures (Drinking water &amp; waste treatment)</b>	<ul style="list-style-type: none"> <li>• Voluntary drinking &amp; wastewater treatment standards for small systems &amp; private wells</li> <li>• Training for small system personnel</li> <li>• Guidelines for immuno-compromised individuals</li> </ul>	<ul style="list-style-type: none"> <li>• UV and other filtration point of use systems</li> <li>• DNA to track pathogen sources</li> <li>• Location of privies and failed drinking water and wastewater systems</li> </ul>	<ul style="list-style-type: none"> <li>• Training for planners and zoning officials</li> <li>• Control of pharmaceuticals and endocrine disruptors into drinking and wastewater</li> <li>• Radon mitigation in drinking water</li> </ul>	<ul style="list-style-type: none"> <li>• UV/point of filtration research for systems that already comply with standards</li> </ul>
<b>Structural Deficiencies (Injury)</b>	<ul style="list-style-type: none"> <li>• Installation of working smoke alarms</li> <li>• Isolation 4-sided pool fencing</li> <li>• Pre-set safe temperature hot water heaters</li> <li>• Air condition during heat waves</li> </ul>	<ul style="list-style-type: none"> <li>• Home safety education on stair gates, window locks and window guards, and match &amp; lighter storage with cabinet locks</li> <li>• Fall prevention by handrails, grab bars, and improved lighting</li> </ul>	<ul style="list-style-type: none"> <li>• Ignition source controls (GCFI)</li> <li>• Escape exit signage</li> <li>• Temperature-controlled water faucets</li> <li>• Improved smoke alarm design</li> <li>• Behavior modification to escape fires</li> </ul>	<ul style="list-style-type: none"> <li>• Advise to elderly on fall prevention</li> <li>• Give away smoke alarm programs</li> <li>• 3-sided pool fencing</li> </ul>

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	Sufficient Evidence	Needs More Field Evaluation	Needs Formative Research	No Evidence or Ineffective
<b>Structural Deficiencies (Injury)</b> <i>continued</i>			<ul style="list-style-type: none"> <li>• Automatic fire sprinkler systems for housing</li> <li>• Pool covers and alarms</li> <li>• Bathtub design to reduce falls</li> <li>• Stove control design to prevent burns</li> <li>• Carbon monoxide exposure prevention through design and engineering</li> <li>• Improved enforcement of building and housing codes</li> <li>• Noise reduction</li> </ul>	

*Source: NCHH/CDC Healthy Homes Expert Panel, December 2007.*