Getting out in front of mild cognitive impairment

Good habits, simplified choices, and memory tools can help you cope.

Mild cognitive impairment (MCI) is a slight but noticeable change in thinking and memory skills, and it affects the ability to work, earn money, and remain independent. “You may miss appointments, lose things frequently, have difficulty recalling names or words you’d like to use. You may also have a harder time finding familiar places and keeping track of important dates,” says Dr. James Ellison, director of the geriatric psychiatry program at Harvard-affiliated McLean Hospital. MCI affects different areas of cognition for different people. But you can limit MCI’s daily impact with simple steps.

Memory
“Good habits compensate for a bad memory,” says Dr. Ellison. If you’re having trouble with remembering, Dr. Ellison advises developing a routine to reinforce consistent habits. That means keeping your keys on a hook by the door, parking in the same area in a shopping center you frequent so you can find your car with less effort, and linking medication regimens to other activities, such as brushing your teeth or eating a meal. Memory aids, such as notebooks or smartphones, are also helpful for commonly called phone numbers, to-do lists, appointments, and important dates. Use the reminder functions on gadgets, such as alarms on pillboxes and alerts on cellphones or computer calendars.

Executive function
Your executive function controls decision-making, planning, and organization. To stay ahead of potential confusion, Dr. Ellison recommends simplifying your choices and keeping the most useful items in your home readily accessible. Get rid of clutter. Clear out your closet to limit your clothing choices, and pare down the number of cooking utensils and pots and pans. Use cellphones and home phones with fewer buttons, and utilize speed dial functions. Label doors, cabinets, and boxes if you can’t remember what’s inside. Reducing clutter in your home will not only make decision-making easier but also reduce the hazards that can lead to falls or increase the risk of fires.

Visuospatial cognition
MCI often impairs your ability to interact with your visual world, which includes finding your way home and judging distances and timing when you’re behind the wheel. For early MCI, Dr. Ellison recommends the use of a global positioning system (GPS) in your car. Avoid driving during high-traffic times and in unfavorable weather conditions. For more advanced MCI, an on-the-road driving evaluation with a driver rehabilitation specialist can help determine if you have the skills to stay behind the wheel. You can

continued on p. 7 >>

FIVE THINGS TO DO THIS MONTH

1 Protect your leg veins. Wear compression stockings if you stand while you work or have a history of varicose veins. (page 3)

2 Keep your balance steady. Exercises such as tai chi can help, and so can weight loss and eye exams. (page 4)

3 Eliminate trip hazards. Search your house for loose wires and rugs, floor clutter, furniture that blocks your path, and missing light bulbs that keep pathways in the dark. (page 4)

4 Help prevent foot pain. Wear shoes with good arch support and plenty of room in the toe area. (page 5)

5 Fit fruits and vegetables into autumn meals. Apples, cranberries, and winter squash complement heartier fare. (page 6)
Should I consider gene testing?

Alzheimer’s runs in my family. Will it help to get gene testing for this disease?

A relatively small fraction of cases of Alzheimer’s disease begin between the ages of 30 and 60—a type called early-onset Alzheimer’s disease. In most cases, this type of the disease, the cause is one of several mutant genes that the person has inherited from a parent. The primary genes that we know about are called PSEN1, PSEN2, and APP. If someone inherits one of these mutated genes, it is very likely (but not certain) they will develop the disease.

Testing for these genes is costly and is not usually covered by insurance. At this time, there is no treatment proven to prevent or slow the onset of the disease. Relatively few people who have close family members with early-onset Alzheimer’s choose to be tested. Others, however, insist on being tested. Some want to know if they are at risk, to help make plans for the rest of their lives. For them, living with uncertainty is worse than getting bad news. Others want to know so that they can volunteer for experimental treatments designed to slow or prevent the disease.

Most cases of Alzheimer’s disease start after age 60. At this time, we know of just one gene that is a reasonably strong predictor of this more typical form of Alzheimer’s: APOE. Everyone carries two copies of this gene, one inherited from each parent. The gene comes in four different types. People who inherit two copies of the APOE4 type are at much higher risk for developing Alzheimer’s compared with people who have no copies of the gene. However, most authorities do not recommend that people get tested for this gene. That’s because you want to know if you are going to get Alzheimer’s disease or not, and the gene does not give you a solid answer. If you inherit two copies of the gene you may still avoid Alzheimer’s, and if you inherit no copies you may still get it. Nevertheless, some people want to know if they are at increased risk.

What’s the benefit of taking magnesium supplements?

A friend told me she takes magnesium pills every day. Does this improve your health?

Most people get all the magnesium they need from a normal diet. However, there are several diseases and treatments that can cause magnesium deficiency: Crohn’s disease (an inflammatory condition of the intestine), celiac disease, inadequately treated diabetes, alcohol abuse, gastric bypass surgery, and diuretic medicines. People with these conditions or treatments should have their blood levels of magnesium checked periodically. If those levels are low, they should consider taking magnesium pills or eating lots of foods rich in magnesium: nuts, fish, certain fruits, many vegetables, and whole grains.
Heart failure diagnosis: Tools for positive outcomes

Don’t get scared. Be proactive by improving diet, exercising, and tracking your symptoms.

When the doctor says you have heart failure, it’s natural to become frightened. “Most patients are very scared, and that is understandable; failure is never a good word,” says cardiologist Dr. Deepak Bhatt, a professor at Harvard Medical School and editor in chief of the Harvard Heart Letter.

The condition isn’t a complete failure of the heart. Instead, the heart struggles to pump enough oxygen-rich blood throughout the body. This can be deadly if untreated. Be proactive by reading the Harvard Medical School Special Health Report Diagnosis: Heart Failure (available at www.health.harvard.edu) and by following these steps:

Be a good patient
Taking all of your medications as directed is most important to living with heart failure. Today’s medicines for heart failure are much more effective than those available even 30 years ago: they can truly be lifesaving.

Track your symptoms
Record your weight at the same each day, and compare it to your weight without excess fluid buildup. Call your doctor if you gain 2 or more pounds in a day or 4 pounds in a week; fluid retention can indicate that heart failure is getting worse. Also note if you have shortness of breath, swelling, or fatigue each day, and call your doctor if new symptoms develop.

Get regular exercise
Physical activity can improve the heart’s pumping strength and slow heart failure damage. With a doctor’s okay, a safe goal for people with mild to moderate symptoms is a 15- to 30-minute session of aerobic exercise three to five times a week.

Watch your diet
“An ejection fraction of 20% is very low, but some people with such a low EF are completely asymptomatic and others are bedridden,” says Dr. Bhatt.

Don’t fixate on EF
Your EF is your ejection fraction, the volume of blood your heart pumps out in one beat. It varies widely, though 55% to 60% is normal (not 100%, as many people mistakenly assume). “An ejection fraction of 20% is very low, but some people with such a low EF are completely asymptomatic and others are bedridden,” says Dr. Bhatt.

Boosting circulation with compression stockings
They’re used to treat venous disease, heart failure, even deep-vein thrombosis.

Your veins return blood to your heart. But when you’re standing or sitting, gravity pulls blood down, away from the heart, causing it to pool in your legs. Compression stockings help keep that from happening. They come in varying pressures—from strong to light—and in varying lengths—from knee-high to hip-high. The strongest stockings must be custom-fit and require a prescription. Lower-strength over-the-counter compression hose are available in pharmacies.

Compression stockings are most often used to treat chronic venous insufficiency, a condition in which the walls of the aging veins are stretched out or the valves in the veins wear out. The valves normally open as blood flows toward the heart, and close to keep blood from flowing backward. If the valves aren’t working properly, the blood may pool, causing legs to feel tired or achy and ankles to swell. Broken valves may also create varicose veins—large, bulging purple veins just under the surface of the skin. “These should be removed to prevent progression to more advanced venous disease. Before removal, compression stockings can help keep blood flowing, and after removal, they can prevent recurrence,” says vascular surgeon Dr. Sherry Scovell, an instructor at Harvard Medical School.

Compression stockings also are used in heart failure, when blood backs up in the veins of the legs, and when there is a blood clot deep in the leg veins (known as deep-vein thrombosis). If you are on your feet a lot, or have a strong family history of varicose veins, you also should consider using these stockings.

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HEART

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A word about balance

The delicate system gets input from ears, eyes, muscles, and joints.

Losing your balance can lead to falls, so it’s important to know what causes imbalance. “An older person’s inner ears, vision, muscle strength, agility, and brain processing aren’t what they used to be. Add to that medicines with side effects, and you can have a significant problem,” says Dr. Steve Rauch, a balance expert at Harvard-affiliated Massachusetts Eye and Ear Infirmary. You can reduce your fall risk by going through physical therapy to improve your balance. And something you can do immediately is reduce the amount of trip hazards in your home, where most falls occur. To start, consider each room in your house, including hallways and floors, for potential danger.

Use this handy checklist below, and consider the following trip hazards in your home:

<table>
<thead>
<tr>
<th>Risk</th>
<th>It’s hazardous if...</th>
<th>Reduce the hazard by...</th>
<th>Fixed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furniture</td>
<td>You have to walk around it.</td>
<td>Creating a new arrangement with a clear path. Make sure to ask for help moving furniture.</td>
<td></td>
</tr>
<tr>
<td>Throw rugs</td>
<td>They are in the main walking path and have unsecured edges.</td>
<td>Removing rugs or using double-sided tape to prevent the rugs from slipping.</td>
<td></td>
</tr>
<tr>
<td>Clutter</td>
<td>It’s on the floor.</td>
<td>Finding new places to stash papers, books, shoes, and other items that wind up on your floors.</td>
<td></td>
</tr>
<tr>
<td>Flooring</td>
<td>Carpeting is loose or torn, and steps are uneven or broken.</td>
<td>Repairing floors and carpeting or replacing carpet with nonslip rubber treads.</td>
<td></td>
</tr>
<tr>
<td>Bathrooms</td>
<td>The tub or shower floor is slippery; there are no grab bars near the tub and toilet.</td>
<td>Using nonslip rubber mats or strips on floors and having grab bars installed.</td>
<td></td>
</tr>
<tr>
<td>Wires and cords</td>
<td>You have to step around or over them.</td>
<td>Coiling or taping cords and wires away from your path.</td>
<td></td>
</tr>
<tr>
<td>Lighting</td>
<td>Light bulbs are missing or burned out; nighttime pathways are not illuminated; lamps are missing from both sides of the bed.</td>
<td>Replacing light bulbs; using automatic night lights for pathways to the bathroom or kitchen; adding lamps to spaces that could use more light.</td>
<td></td>
</tr>
</tbody>
</table>

The slow, rhythmic movements of tai chi can help improve your balance.

Unlike other senses that have only a single source of information, the sense of balance gets input from many places. To begin with, there are five balance organs in each ear: three detect rotational movements and two detect linear movement, like accelerating in your car. But balance also gets input from your vision, muscles, and joints. All of this information converges in the brain, which processes it. If the brain thinks you are unbalanced, it sends back signals to your muscles to take corrective action—to make the movements necessary to keep your body in balance.

There’s no one medical specialty that truly covers the whole balance system. But you can ask your doctor to address a number of problems that may be affecting your balance, such as obesity, vision problems, peripheral neuropathy (common in people with diabetes), Parkinson’s disease, medications, multiple joint replacement, and inner ear problems. In addition, it’s important to stay mobile by exercising. The traditional Chinese exercise called tai chi, which uses slow, rhythmic, meditative movements, has been shown to be effective for improving balance. It can be safe in people who may have health issues that prevent more aggressive or energetic activities.
Quick fixes for your aching feet
Addressing arch, tendon, and nail pain will protect your mobility and independence.

You’re not alone if you’ve developed pain in your feet since the temperatures outside dropped. “Colder weather makes you realize there’s a problem,” says Dr. Jim Ioli, assistant professor of orthopedic surgery at Harvard Medical School. “You’re no longer wearing sandals, and your feet are enclosed in shoes. That brings pain to your attention.” Address these ailments as soon as possible.

Fallen arches
Age, obesity, and inflammatory diseases such as rheumatoid arthritis or lupus can cause the primary tendon in your foot (the posterior tibial tendon) to stretch and lose elasticity. It results in pain in your arch, behind the ankle and up the leg. “Unfortunately, the loss of elasticity is permanent,” says Dr. Ioli.

Quick fix: Wear a running shoe that has good arch support and a deep heel counter. Supplement with over-the-counter inserts for arch support if necessary.

Long-term fix: Try custom arch supports called orthotics, or a brace called an ankle-foot orthosis if the condition is severe.

Achilles tendinitis
Obesity, overuse, and high heels can shorten and tighten the Achilles tendon at the back of the heel, where you feel pain. This usually goes away with rest and a lower shoe heel.

Quick fix: Rest, elevate, and ice the painful area, and take nonsteroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen (Advil) if your doctor says it’s okay. Do calf stretches when you’re feeling better. Switch to shoes with heels no higher than an inch and a half.

Long-term fix: “You’ll want to immobilize the heel in a walking cast, which will rest the tendon. Physical therapy with iontophoresis can help. It uses electrical current to push cortisone through the skin into the heel,” says Dr. Ioli.

Pinched nerve
Bunions, hammertoes, and shoes or boots that are tight in the toe put you at risk for a Morton’s neuroma. It’s a thickening of the nerve, usually between the third and fourth toes, and it feels like you’re standing on a pebble, causing stinging, burning, and numbness.

Quick fix: Elevating the foot won’t help, but you can rest and ice your foot, take NSAIDs with a doctor’s okay, and get shoes with more room in the toe. A metatarsal pad placed below the pad of the foot can help.

Long-term fix: “You may need a series of three steroid injections over a period of six months. If that doesn’t work, we operate to remove the neuroma,” says Dr. Ioli.

Ingrown toenail
This results when a border of the nail grows into the skin and causes infection. It typically gets hot, red, and swollen and develops drainage. “I see this frequently,” says Dr. Ioli. “People have ingrown nails they’ve tried to trim, but their eyesight is faulty and it caused a problem.”

Quick fix: As long as you’re not diabetic you can soak your toe in warm water and put an antibiotic ointment and a Band-Aid on it.

Long-term fix: If the infection isn’t gone in five days, a podiatrist can remove the offending portion of the nail or cauterize the nail chemically, so it doesn’t grow back in one corner.

Plantar fasciitis
Overuse commonly causes heel pain where the plantar fascia, a ligament-like structure along the bottom of your foot, attaches to the heel bone, but this condition may also result from obesity, foot structure, or inflammatory disease. This can become a chronic problem.

Quick fix: Rest, elevate, and ice your heel, and take NSAIDs with a doctor’s okay. Over-the-counter arch supports and calf stretching can also help.

Long-term fix: “This condition responds well to physical therapy,” says Dr. Ioli. “You may also need custom orthotics and sometimes a steroid injection to reduce pain and inflammation.”
Must-haves from the produce aisle

Don’t leave the grocery store without fall favorites like apples, cranberries, and butternut squash.

Cooler weather outside may make you yearn for heartier fare at mealtimes, but it’s important not to skimp on fruits and vegetables. For suggestions on the must-have produce available right now, we turned to registered dietitian Stacey Nelson from Harvard-affiliated Massachusetts General Hospital. Here are her top five picks.

1 | Apples
**Nutritional benefits:** One medium three-inch apple has less than 100 calories but 4 to 5 grams of fiber, making it a satisfying, low-calorie snack. The type of fiber in apples has been shown to help keep total and “bad” cholesterol levels in check.

**How to enjoy them:** Eat apples whole, or dip slices into peanut butter for a protein-rich snack. “You can easily make your own applesauce or apple butter, add apples to a roast chicken recipe, or toss into your favorite stuffing,” says Nelson.

2 | Cranberries
**Nutritional benefits:** These contain polyphenols and anthocyanins, powerful antioxidants that can help fight inflammation and cell damage. Some data suggest they may help reduce the rate of urinary tract infections, especially in women who are most prone to them. Cranberries also contain vitamin C.

**How to enjoy them:** Nelson warns that most of us consume cranberries in high-calorie, high-sugar foods and drinks like juices and cranberry sauce. Instead, add raw, cooked, or dried unsweetened cranberries to chicken or tuna salad. Also try mixing them into couscous, muffin mixes, and fresh chutneys for tartness.

3 | Carrots
**Nutritional benefits:** Carrots are rich in the antioxidant beta carotene. The body converts beta carotene to active vitamin A as needed to help with vision, immunity, and general health. One cup of raw carrots, for 50 calories, will also provide 3 to 4 grams of fiber.

**How to enjoy them:** Carrots are versatile, whether cooked or raw, as a side dish or an ingredient in stir-fries, soups, or salads. Nelson notes that raw carrots pair well with hummus or yogurt dips instead of chips and crackers, and shreds nicely into salads and slaw. Roast carrots with onions and other root vegetables such as sweet potatoes, parsnips, and turnips for a side dish.

4 | Cabbage
**Nutritional benefits:** A cup of shredded raw red cabbage has only 22 calories but close to 40 milligrams (mg) of vitamin C. It’s also rich in beta carotene.

**How to enjoy it:** Shred cabbage and enjoy raw in salads, wraps, and slaws. “Raw cabbage leaves make for a lovely wraps,” says Nelson. “Stuff them with diced chicken, minced nuts, and other vegetables. You can also stuff and bake boiled cabbage leaves and add them to soups.”

5 | Butternut (winter) squash
**Nutritional benefits:** This is another fall vegetable rich in beta carotene, vitamin C, antioxidants, and fiber. A whole cup of cooked butternut squash has only 80 calories and almost 7 grams of dietary fiber. Another bonus: it is rich in potassium but very low in sodium.

**How to enjoy it:** “Boil butternut squash cubes and mash them as a side dish, or roast them and puree for soups, or use as an ingredient in stews, risottos, or baked casseroles,” says Nelson.
Caution: These are the most addictive pain meds

97% of users don’t have a problem with opioids. Here’s how to avoid becoming part of the other 3%.

The dangers of prescription painkiller addictions have been in the news for years, as abuse and overdose of the drugs has skyrocketed. The biggest offender is a class of drugs called opioids, such as oxycodone (OxyContin), hydrocodone (Vicodin), hydromorphone (Dilaudid), and meperidine (Demerol). If your doctor suggests that you try one of these medications to relieve pain, it is unlikely you will become addicted. But you must proceed with caution.

Prescription painkillers
Opioids, and a non-opioid that works the same way called tramadol (Ultram), decrease the perception of pain. They also create a feeling of euphoria for some people, especially those who are not in pain. Side effects include nausea and itching. Opioids are typically used for the short term, to treat severe pain following surgery. They may also be used for some long-term pain, such as pain related to cancer and terminal illness. Treating back pain and arthritis with opioids is controversial.

Drug risks
A common risk of opioids is dependence. “If you need opioids for only a few days after surgery, they’re not a problem,” says Dr. Karsten Kueppenbender, an addiction psychiatrist at Harvard-affiliated McLean Hospital. “But any patient who is treated with opioids for 30 days or longer will develop opioid tolerance. This causes them to suffer withdrawal symptoms if the medication is stopped abruptly. Users may also begin to want more of these drugs to achieve the same effect. It can happen to anybody.”

Dependence is not the same as addiction, which is characterized by compulsive use and preoccupation with the drug that interferes with normal life. People who in the past have become addicted to another substance, such as alcohol or nicotine, are at increased risk of becoming addicted to opioids. The risk also is higher in people with untreated mental illness such as major depression and post-traumatic stress disorder.

What you can do
Don’t be alarmed if your doctor prescribes an opioid. “Ninety-seven percent of patients don’t have a problem with opioids,” says Dr. Kueppenbender. He advises that opioids for minor surgical pain be limited to no more than seven days. For long-term use, he says you should take opioids by the clock as prescribed. Don’t try to reduce your addiction risk by cutting down on your dose and waiting until the pain gets so bad you have to take the medicine. That could backfire: the memory of how bad the pain got, and the relief from the opioid, may actually increase the risk of becoming addicted.

If you are prescribed opioid drugs for long-term use, be sure your doctor has hooked you up with a medical team that has a strict protocol in place for people taking opioids. That means the team should be easily accessible to you, it should require monthly check-ups for reassessment of the drug’s use, and it should conduct random urine toxicology screenings for patients.

Cognitive impairment... continued from p1
usually locate a specialist through hospital geriatric or occupational therapy departments, driving schools, and state departments of motor vehicles.

Language
MCI can make communicating a challenge, because your ability to recall words and use them properly in conversation may become impaired. But you shouldn’t stop chatting with family and friends. “Continuing to converse with others is the best way to keep language skills fresh,” Dr. Ellison says. When you can’t think of a word, he suggests that you figure out another way to get the meaning across—or just say that you’re having trouble finding the precise word, and then explain what you’re trying to say. If you let anxiety take over, Dr. Ellison says, it may inhibit recall. When word loss strikes, just pause for a moment, allow for the possibility that the word may or may not come back to you, and move on in your conversation.

Social cognition
MCI can interfere with social interactions. It may complicate communication because more effort is required in order to recall someone’s name, remember shared experiences, or hold up your end of the conversation. However, Dr. Ellison says it’s vital to stay in touch with friends and family regularly, beyond the telephone. “When life gets more difficult, we simplify by eliminating the activities which are less crucial for survival. But research suggests that maintaining social interaction is beneficial for preserving cognition, and many of the most pleasurable experiences are the ones that we share with others,” he says. Combat social cognition problems by regularly scheduling any activity you enjoy—dancing, a visit to the theater, a walk in the park—that involves interaction with other people.

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NEWS BRIEFS

Get acclimated before activity in higher altitudes
Planning any skiing or hiking at high altitudes? You might want to rethink where you sleep the night before the activity. A study in the July 2013 *American Heart Journal* suggests that older men can lower their risk of sudden fatal heart attack by first becoming acclimated to the higher elevation. Researchers analyzed more than 300 heart attack deaths of older men that happened during week-long vacations in the Austrian mountains, between 5,000 and 6,000 feet above sea level. About 40% died while doing cross-country, downhill, or back-country skiing, and 60% died while hiking on easy terrain. Past studies have shown that men over age 34 who hike at this altitude have a fourfold higher risk of sudden death than during normal activities at low altitudes. What this new study showed is that men who slept the night before at about 2,300 feet above sea level were more than five times as likely to die on the first day as men who slept at about 4,300 feet above sea level. Researchers conclude that a period of acclimatization before recreation may reduce the triggers of heart attacks (at higher altitudes the air has a lower oxygen tension, and your heart has to work harder). In other words, if you’re going to go skiing or hiking in the mountains, give yourself a day of rest first, and make sure it’s at an altitude similar to the one where you’re going to go and play.

Don’t look to insoles to solve your knee pain
Save your money if you’re considering investing in a wedge insole to relieve your pain from knee osteoarthritis; a research review published in the Aug. 21, 2013, *Journal of the American Medical Association* suggests that the shoe inserts do little—if anything—to relieve arthritis pain. Wedge insoles, and in this case lateral wedge insoles, are placed in the shoe to prop up or tilt the outside of your foot. The idea is that it reduces the load on the inner knee joint, where knee arthritis often starts. But after evaluating the results of 12 different shoe-based clinical trials, researchers didn’t find an improvement in pain. That finding comes after a recent statement from the American Academy of Orthopaedic Surgeons, which said it couldn’t recommend lateral wedge insoles for people with knee osteoarthritis, based on current research. Prices for the inserts range from $10 at a pharmacy to $500 for a custom-fit orthotic. So what should you spend your money on instead? Consider flat-heeled, flexible shoes that mimic the movement of walking barefoot, along with a cane to boost your stability.

How good are you at putting names and faces together?
Here’s a novel way to help doctors diagnose early dementia among middle-aged people: ask them to put names to famous faces. A study in the Aug. 13, 2013, *Neurology* found that people with early-onset dementia between the ages of 40 and 65 had far more trouble identifying well-known faces than people in that age group without dementia. Both groups were shown photos of Princess Diana, Albert Einstein, and 18 other iconic celebrities and historical figures. Those with early dementia scored an average of 46% in naming the faces, compared with 93% for those free of dementia. Researchers also tracked how well people in each group scored at recognizing—but not naming—the faces, which may help determine the specific type of cognitive impairment a person has. Researchers say the test may one day help doctors screen people for early dementia and help us understand how the brain works when it comes to remembering and retrieving knowledge of words and objects.

What’s coming up:
- Weaning yourself off that sleep aid. Harvard experts teach you how to do it.
- Name that headache. How identifying the pain can help bring relief faster.
- Try this during commercial breaks. Easy exercises you can do from your couch.
- High tech alerting devices. What to look for in a good monitoring system.