



Information on locating devices

Six in ten people with dementia become lost at some point, often without warning. The balance between independence and safety is a delicate one. While being lost is distressing and has the potential to be dangerous, having a safety plan can shorten the time spent in searching for a lost person with dementia and reduce the harm.

This safety plan may include the use of locating devices and enrolling with a registry such as [MedicAlert®](#) [SafelyHome®](#) or a vulnerable persons' registry supported by your local police services or the OPP.

There are benefits and draw backs to locating devices. Some people may consider the use of a device improves personal freedom and safety while giving caregivers peace of mind. Others may feel this is an invasion of privacy.

Using a locating device does not decrease the need to check in often with the person with dementia.

It is important that people who are recently diagnosed with dementia have a discussion as early as possible with the people who are important in their lives. An open discussion with all concerned will help with the decision making. Support is available from your local Alzheimer Society.

Locating devices tend to fulfill two needs:

1. To locate a person who is lost.
2. To provide increased independence to a person who wishes to go out alone but may become lost.



For local Alzheimer Society contact information, call 2-1-1
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Types of devices

New technology appears on the market place daily.

Methods of locating vary with the devices:

- Some rely on caregivers to receive a call or alert, then start a search
- Some use a computer, telephone, cell phone, call centre operator or directly contact police
- Some send out an alert when a boundary is crossed (a predetermined, adjustable “geo-fence”)

Device type	General features	Limitations	Applications
Global Positioning System (GPS)	<ul style="list-style-type: none"> • Uses radio signals transmitted from satellites to electronic receivers to identify the location of a person wearing a transmitter to within a few metres • Relies on battery power but could use AC power, computers, internet connections, standard telephone service, cellular phone service and call centre operators 	<ul style="list-style-type: none"> • Intended for use out of doors • Not able to pinpoint exact location • Will not work under bridges, inside buildings, underground or underwater • Satellite signals easily interfered with by electrical interference, dense bush, or high rise buildings 	<ul style="list-style-type: none"> • Built into some models of cars • Some use internet maps to allow tracking • Some allow user-defined safe boundaries • A-GPS (assisted GPS) uses an assistance server (a cellular signal tower) to reduce locating time

Device type	General features	Limitations	Applications
<p>Radio Frequency (RF, Frequency Modulation or homing device)</p>	<ul style="list-style-type: none"> ● Transmits radio signals to determine the person’s exact location ● Relies on battery power that lasts about 45 days ● Multiple receivers are used to pinpoint the exact transmitting location ● Works in wooded areas, inside buildings ● Signals become stronger as the receivers approach the transmitter ● Signal assigned to the device is a unique radio frequency specific to the transmitter (i.e. the wearer of the device) 	<ul style="list-style-type: none"> ● Range can be limited to less than 5 km 	<ul style="list-style-type: none"> ● Project Lifesaver[®] is a program supported by the OPP and several regional police services ● A wristband worn by the person who may get lost

Device type	General features	Limitations	Applications
Cell phone	<ul style="list-style-type: none"> • Users can activate a locating system by dialing 911 • Cell phone allows for 2-way communication 	<ul style="list-style-type: none"> • Relies on the person carrying a cell phone and knowing how/when to use it • Depends on having a cellular signal • Only available on newer models of cell phones 	<ul style="list-style-type: none"> • Newer technologies such as iPads, iPhones, smart phones

Deciding on a device

Consider the following when deciding what type of device would best meet your needs:

Where will the device likely be used?

- | | | |
|---------------------------------------|---|----------------------------------|
| <input type="checkbox"/> In your home | <input type="checkbox"/> In a care facility | <input type="checkbox"/> Indoors |
| <input type="checkbox"/> Outdoors | <input type="checkbox"/> Multiple locations | |

Where will a search likely take place?

- | | | |
|--|---------------------------------------|-------------------------------------|
| <input type="checkbox"/> Within a building | <input type="checkbox"/> Outdoors | <input type="checkbox"/> Urban |
| <input type="checkbox"/> Rural area | <input type="checkbox"/> Tree-covered | <input type="checkbox"/> Open space |
| <input type="checkbox"/> Near water | | |

Which devices are most appropriate for these settings?

How much freedom of movement would the device allow?

If necessary, would the person with dementia be able to use the device?

Who will be doing the monitoring or locating?

- Family
- Caregiver
- Outside agency/organization

Specific things to consider

For the person who may get lost:

- Does the device need to be attached or carried by the person with dementia?
- Can the person tolerate wearing this technology?
- Does it matter what the technology looks like? E.g. size, weight, appearance?
- Would a “help/call” button be useful?
- Does the person need to identify his/her own location?

For the caregiver(s):

- Who needs to locate/track the person? E.g. caregiver, agency, call centre, police?
- Is 2-way communication needed with the person who is lost?
- How easy is it to maintain the device? E.g. cleaning, charging the battery?

- Does the device require special skills/knowledge/training to use?
- Does the caregiver need to have knowledge of the area? Is a map required?
- Is the system flexible to changing needs? E.g. going on vacation?

Technical and service issues with the devices:

- How reliable is this technology? Has it been tested by a reputable agency?
- Is this device endorsed/supported by police services?
- Will this device work if it is
 - o Immersed in water?
 - o Out of a specific range?
 - o Away from pre-determined area or out of a building?
- Will this device provide an alarm when the person
 - o Removes the device?
 - o Falls?
 - o Is near water?
 - o Is immersed in water?
 - o Is out of a specific range?
 - o Is away from a pre-determined area or leaves a building?

- Does this device include
 - A panic button?
 - Two-way communication?
- Is the device durable?
- Does the device require other equipment such as a computer, the internet or a cell phone to work?
- Is the device easy to remove and be lost or forgotten by the person?
- Is there a trial period for the device?
- How long is the warranty period?
- What does the warranty cover?
- Is there a trade-in policy for upgrading as needs change or new technology becomes available?
- Is there a “loaner” unit that can be quickly available if needed?
- Is the device acceptable to the person wearing it?

Financial issues:

- How much does the device cost?
- Is there an ongoing operating fee such as monthly service fees or repair costs for the device?
- Is there a cost to replace batteries?
- Will this device be covered by any funding source? E.g. health care insurance, charity/service clubs, government Social programs?

References

1. McMaster University, School of Rehabilitation Science (2006). *The Locating Technology Project. Locating Technology for People Who are at Risk of Wandering: Tips for consumers.*
2. Alzheimer Society of Canada, *Safely Home*[®] Program.



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