

Role of the Dental Hygienist

As Alzheimer's disease advances, impairment of everyday routine activities also increases. Some of these activities include eating, brushing their teeth, taking a shower and dressing. It is more difficult for patients with Alzheimer's disease to perform those tasks, therefore they depend on caregivers to do so. Some patients with Alzheimer's disease have anger reactions, panic attacks or cry while being helped by the caregivers, therefore, their oral hygiene gets compromised and they become more prone to get oral diseases. The medication they take also reduces the flow of saliva as a secondary effect, which contributes to more cavities experience. Performing oral hygiene in a patient with Alzheimer's disease can be challenging, since they may perceive it as a threat. As dental professionals, it is crucial to help them maintain tooth brushing as part of their daily routine.

While performing oral hygiene care:

- Approach the patient with a smile, have a friendly attitude
- Sit next to them and guide them through brushing by holding their hand
- Brush your teeth in front of them
- Maintain eye contact
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This helps reducing the stress of the visit and makes them feel comfortable. As dental professionals, we are helping Alzheimer's disease patients to avoid pain, tooth decay, periodontal disease and consequently tooth loss.

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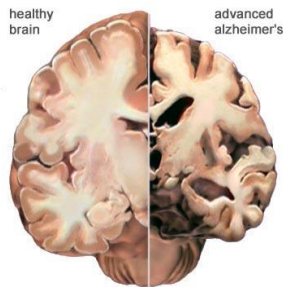
NEW YORK CITY COLLEGE OF TECHNOLOGY
CITY TECH
WHERE CAN TECHNOLOGY TAKE YOU?

The Oral Implications of a Patient with Alzheimer's Disease

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Alzheimer's disease is a neurological disease that targets the brain cells. There is irreversible loss of neurons in the cerebral cortex of the brain. Damage occurs years before the onset symptoms. It is a progressive disease that worsens as time passes. It is a form of dementia. As the disease advances, the patient begins to lose the ability to complete daily tasks and it eventually causes death. It interferes with memory, reasoning, thinking and the ability to complete tasks. As of today there is no cure or prevention.



http://www.alz.org/brainatour/healthy_vs_alzheimers.asp

Signs and Symptoms

Early:

- Overthinking problems
- Poor judgment

Moderate:

- Getting lost
- Inability to complete tasks
- Personality changes
- Communication problems
- Confusion
- Memory loss
- Hallucinations

Severe:

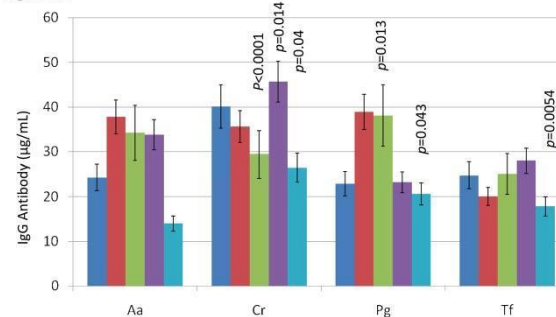
- Difficulty swallowing
- Loss of bowel and bladder control
- Inability to communicate

Possible Role Between Periodontal Dis-ease and Alzheimer's disease

A longitudinal study was conducted on 158 participants. Blood samples were drawn and were tested for antibodies to 7 types of bacteria that causes periodontal disease. Blood samples were taken initially on all participants and over a period of time. The results showed that the levels of antibodies to the bacteria F nucleate and P intermedia were significant when compared to the control group and the level of antibodies remained high after the conversion to Alzheimer's disease. Antibodies tested to these bacteria:

- Aggregatibacter Actinomycetemcomitans
- Porphyromonas gingivalis
- Fusobacterium nucleatum
- Tannerella forsythia
- Prevotella intermedia

Figure 1A



<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3712346/pdf/nihms484263.pdf>

The OHIP-14 (Oral health impact profile) was composed of 7 part questionnaire, which focuses on the functional limitations, physical pain, psychological discomfort, handicap, physical, psychological and social disability. The main purpose of the experiment is to differentiate the relationship between caries, periodontal disease frequency and quality of life in AD patients.

The outcome of the experiment showed a correlation between the AD patients and their high index of pathologies in oral systemic health due to progressive nature of the disease.

The design of the OHIP-14 clearly stated how AD patients feel about their social life and daily activities. The questionnaire itself gives strong consent how oral health can impact the quality life of AD patients. Also Clinical finding like Probing, biofilm index, gingival bleeding, and tooth mobility were evaluated.



<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3798211/>

Caries experience of institutionalized elderly and its association with dementia and functional status

During a study performed in residential aged care facilities in Perth, Western Australia, from 2002-2008, residents were examined using extra-oral and intra-oral examinations. There was a significant difference in the mean number of active decay and caries in roots among residents based on their Activities of Daily Living score, which measures the abilities of a person to perform daily activities without help.

The DMFT (Decayed, Missing and Filled Teeth Index) for caries detection was also used. The study explains how patients with dementia have inadequate oral hygiene and lack of and efficient oral care provided by caregivers at these facilities. This is unfortunate since patients with dementia more often face emergency situations related to a toothache in comparison with those who do not have this condition.