CIGNA MEDICAL COVERAGE POLICY

The following Coverage Policy applies to all plans administered by CIGNA Companies including plans administered by Great-West Healthcare, which is now a part of CIGNA.

Effective Date 2/15/2009
Next Review Date 2/15/2010
Coverage Policy Number 0289

Subject Chemical Hair Analysis

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Hyperlink to Related Coverage Policies

Attention-Deficit/Hyperactivity Disorder(ADHD): Assessment and Treatment
Autism Spectrum Disorders/Pervasive Developmental Disorders: Assessment and Treatment
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Complementary and Alternative Medicine

INSTRUCTIONS FOR USE

*Coverage Policies are intended to provide guidance in interpreting certain **standard** CIGNA HealthCare benefit plans as well as benefit plans formerly administered by Great-West Healthcare. Please note, the terms of a participant's particular benefit plan document [Group Service Agreement (GSA), Evidence of Coverage, Certificate of Coverage, Summary Plan Description (SPD) or similar plan document] may differ significantly from the standard benefit plans upon which these Coverage Policies are based. For example, a participant's benefit plan document may contain a specific exclusion related to a topic addressed in a Coverage Policy. In the event of a conflict, a participant's benefit plan document **always supercedes** the information in the Coverage Policies. In the absence of a controlling federal or state coverage mandate, benefits are ultimately determined by the terms of the applicable benefit plan document. Coverage determinations in each specific instance require consideration of 1) the terms of the applicable group benefit plan document in effect on the date of service; 2) any applicable laws/regulations; 3) any relevant collateral source materials including Coverage Policies and; 4) the specific facts of the particular situation. Coverage Policies relate exclusively to the administration of health benefit plans. Coverage Policies are not recommendations for treatment and should never be used as treatment guidelines. Proprietary information of CIGNA. Copyright ©2009 CIGNA*

Coverage Policy

CIGNA does not cover chemical analysis of the hair because it is considered experimental, investigational or unproven.

General Background

Hair is a protein that grows out of a hair follicle in the skin. Typically, a hair grows for many months, falls out of the follicle and is replaced with a new hair. The growth phase varies depending on the area of growth; however, each hair follicle goes through three stages in the hair growth cycle: the cyclical growth phase (i.e., anagen), transition phase (i.e., catagen) and resting phase (i.e., telogen). The average growth rate for scalp hair is very slow, approximately one centimeter (cm)/month. Some authors hypothesize that hair can serve as a record of the trace metals associated with normal and abnormal metabolism, as well as a record of the trace metals from environmental exposure. As a result of slow growth, however, it may take several weeks for a hair sample to reflect changes that have occurred in the body.

During the anagen phase, hairs are actively growing, and minerals and other substances are deposited in the hair shaft within the protein hair matrix. This phase may last from 2–6 years. The hair is exposed to the metabolic environment only briefly; as it approaches the skin's surface, its outer layers become hardened and

seal in the trace metals accumulated during its formation. Hairs are routinely lost during the telogen phase, when the follicle is dormant or resting. The period between the anagen and telogen phase, referred to as the catagen phase, is a short transitional phase. Generally, 80–90% of the hair follicles are in the anagen phase, 2% in the catagen phase, and 10–18% in the telogen phase.

Two methods that may be employed to assess hair growth include trichograms and chemical analysis. Trichogram, also referred to as microscopic examination of the hair, may be used to evaluate morphology of hair and provides information regarding hair growth rate and anagen/telogen ratio. The most common indication for this test is alopecia, although it may also be utilized for determining structural abnormalities of the hair bulb or shaft.

Chemical hair analysis may be performed for measurement of mineral content through various chemical applications. Proponents state hair analysis can be useful for evaluating a person's general state of health and may help to diagnose skin diseases (e.g., alopecia), to detect heavy metals (e.g., lead, mercury, arsenic) to identify nutritional/mineral deficiencies, or to perform deoxyribonucleic acid (DNA) analysis and identify the presence of illegal drugs (e.g., cocaine, marijuana). While there is evidence that hair analysis has been used to confirm poisonings by some elements, such as mercury and arsenic, when used for screening, its utility is limited by difficulties such as distinguishing between endogenous and exogenous sources. According to a clinical toxicology textbook, elevated levels of mercury or arsenic in hair indicate past exposure; however, external contamination may cause falsely elevated levels (Chiang, 2001; Hryhorczuk and Eng, 2001). Consequently, interpretation may be unreliable. For most other substances, there is limited evidence and well-designed studies are lacking to support hair as a true biological marker. As a result of the minimal information available regarding the uptake of minerals or chemicals delivered to the hair follicle, and insufficient data to predict a health benefit from measuring substances in the hair, hair analysis is not considered a reliable diagnostic tool.

Literature Review

There are various laboratory methods of determining contaminants in hair. However, authors have reported that current laboratory methods are unable to separate endogenous material from exogenous material in the hair sample, limiting interpretation of results (Steindel and Howanitz, 2001; Agency for Toxic Substance and Disease Registry [ATSDR], 2001). In addition, the results of hair analysis assessment have been shown to be affected by environmental factors (e.g., demographics), biological characteristics (e.g., hair color, thickness and age) and cosmetic treatment of hair (e.g., coloring, use of hair spray or hair gels).

Seidel et al. (2001) reported on the reliability of data from commercial laboratories advertising multi-mineral hair analysis for nutritional or toxicity assessment. A split hair sample was taken from the scalp of a single volunteer and submitted for analysis to six commercial U.S. laboratories which analyze 90% of samples submitted for mineral analysis in the United States. The authors reported that variations in sample preparation methods, calibration standards and normal reference range values resulted in conflicting classifications (e.g., high, normal, low) of nearly all minerals. Laboratories also reported conflicting dietary and nutritional supplement recommendations based on their results.

The ATSDR reviewed the use of hair analysis as an assessment of environmental exposure. The panel discussion emphasized analytical methods of hair analysis, factors affecting the interpretation of analytical methods, toxicological considerations, data gaps and future research requirements. The main focus of the panel was to determine the utility of hair analysis in evaluating exposures and health effects at hazardous waste sites. The panel noted that the data were insufficient to predict health effects from the concentrations found in the hair and that, while the presence of a substance in the hair may suggest exposure, it does not indicate the source of exposure (ATSDR, 2001).

American Academy of Neurology (AAN), in conjunction with the Child Neurology Society, published practice parameters regarding the screening and diagnosis of autism in 2000. Although the use of hair analysis as a diagnostic test was considered, it was not recommended (Filipek et al., 2000).

The American Medical Association's (AMA) current policy on chemical analysis of hair, adopted in 1984 and reaffirmed in 1994, states, "The AMA opposes chemical analysis of the hair as a determinant of the need for medical therapy and supports informing the American public and appropriate governmental agencies of this unproven practice and its potential for healthcare fraud."

Summary
Well-designed studies are lacking and evidence in the published, peer-reviewed scientific literature is insufficient to support improved health outcomes resulting from chemical hair analysis. Data regarding the uptake of minerals into hair are minimal, and multiple variations in laboratory methods have been reported with poorly established reference values. Chemical hair analysis as a diagnostic test is of unproven clinical benefit for any indication.

Coding/Billing Information

Note: This list of codes may not be all-inclusive.

Experimental/Investigational/Unproven/Not Covered when used to report chemical hair analysis:

CPT®* Codes	Description
82175	Arsenic

HCPCS Codes	Description
P2031	Hair analysis (excluding arsenic)

ICD-9-CM Diagnosis Codes	Description
	All codes

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Policy History

Pre-Merger Organizations	Last Review Date	Policy Number	Title
CIGNA HealthCare	2/15/2008	0289	Chemical Hair Analysis